



REPORT

ON THE

Health of the County Borough of Bootle
for the year 1911,

BY

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Medical Officer of Health,

Medical Superintendent of the Infectious Diseases Hospital,

School Medical Officer.

BOOTLE :
BOOTLE TIMES, LIMITED, 30, Oriel Road.

1911,

HEALTH COMMITTEE

OF THE

BOOTLE TOWN COUNCIL,

1911-12.

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and

†*His WORSHIP THE MAYOR (Mr. Councillor Smith, J.P.)

** Members of the Hospital Sub-Committee.*

† Members of the Housing Sub-Committee.

Staff of the Public Health Department.

**Medical Officer of Health and
Medical Superintendent of the Linacre Hospital for Infectious Diseases :**

W. ALLEN DALEY, M.B., B.S., B.Sc. (Lond.), B.A. (R.U.I.),
D.P.H. (Cantab.).

Resident Medical Officer of the Hospital for infectious Diseases :

C. W. LAIRD, B.A., M.D. (Dubl.), D.P.H.

**Inspector of Nuisances, Inspector under the Sale of Food and Drugs Acts,
and the Housing, Town Planning, &c. Act :**

†*R. J. McCULLOCH.

Assistant inspectors of Nuisances :

*H. V. SMITH. H. OWENS. *H. MATTHEWS.

Clerical Staff :

R. MORLEY. Miss B. WILSON.

Lady Sanitary Inspector and Inspector under the Midwives Act :

*‡Miss ADA STOTT.

Lady Sanitary Inspector :

*Mrs. McKOWEN.

Disinfecting Workmen :

J. LOBB. J. WALL.

* *Certificated Inspector of Nuisances.*

† „ *Inspector of Foods.*

‡ „ *Midwife.*

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HEALTH DEPARTMENT,

TOWN HALL,

March 9th, 1912.

*To the Chairman and Members of the
Health Committee.*

GENTLEMEN,

I have the honour to present to you my First Annual Report on the Sanitary Condition of the Borough and the Health of its inhabitants.

During the first five months of the year, the work was carried out by the late Dr. Wm. Daley. I was appointed Medical Officer of Health on June 5th, 1911.

The subjects dealt with are those laid down by the Local Government Board in their Memorandum on the Preparation of Annual Reports.

The results of the census show that the population in April, 1911, was 69,881.

The birth-rate was somewhat higher than during 1910; except for that year, it is the lowest on record.

The death-rate was higher than it has been for the past few years. This is, to a considerable extent, due to the epidemic of infantile diarrhoea which occurred during the third quarter. Excluding the deaths from this disease, the zymotic death-rate was not high.

Pulmonary Tuberculosis caused 96 deaths; this is a preventable disease and great efforts should be made to reduce its ravages.

A detailed review is given of the work which has been undertaken for the amelioration of the Housing of the Working Classes.

I beg to thank you for the attention and consideration which you have invariably given to my suggestions.

I must acknowledge my appreciation of the efficient manner in which all the members of the staff have done their duty during my term of office.

I am, Gentlemen,

Your obedient servant,

W. ALLEN DALEY,

Medical Officer of Health.

STATISTICAL SUMMARY FOR 1911.

Area in Acres (inclusive of Dock Estate)	...	...	...	...	1,946
Area in Acres (exclusive of Dock Estate)	...	...	...	...	1,609
Population at Census of 1911...	...	...	...	...	69,881
Estimated Population in July, 1911	...	...	...	...	70,100
Population per Acre (excluding Dock Estate)	.	...	...	...	43·5
Number of Houses in the Borough on December 31st, 1911	...	...	...	...	13,953
Number of persons in each inhabited house (at Census of 1901)	...	...	...	...	5·8
Number of Births during 1911	...	...	...	...	2,120
Birth-rate per 1,000 of the population	...	...	...	...	30·2
Number of Deaths	...	...	...	...	1,283
Death-rate per 1,000 of the population	...	...	...	...	18·3
Natural Increase of the population during the year	...	...	...	...	837
Number of deaths of Infants (under the age of one year)	..	...	...	...	308
Infantile Mortality per 1,000 births	...	...	...	...	145
Number of Uncertified Deaths	...	...	...	...	47
Death-rate from the seven principal Zymotic Diseases per 1,000 of the population	...	...	...	...	2·9
Death-rate from Diarrhoea and Enteritis per 1,000 of the population	...	...	...	...	2·0
Death-rate from Phthisis per 1,000 of the population	...	...	...	...	1·3
Death-rate from all forms of Tuberculosis per 1,000 of the population	...	...	...	...	1·7
The Rateable Value of the Borough was	...	...	...	...	£470,318

BOROUGH OF BOOTLE.

ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH
TO THE
HEALTH COMMITTEE.

Bootle is a County Borough, and is 1,946 acres in extent, excluding the bed of the River Mersey. It is bounded on the south and east by the City of Liverpool, on the north by the Urban Districts of Waterloo-with-Seaforth and Litherland. The western boundary of the Borough abuts on the mouth of the River Mersey.

PHYSICAL FEATURES OF THE DISTRICT.

The land falls from east to west, i.e., towards the river. The highest parts are situated in the extreme north-east and south-east boundaries, and reach a height of 125 feet above mean sea level. The lower portions, adjoining the docks, are from 22 to 24 feet above mean sea level.

GEOLOGICAL FORMATION.—The upper layer consists of drift-sand, varying in depth; below which there is, in places, a layer of clay. Underneath this is red sandstone which appears at the surface in certain parts of the town.

POPULATION.

The estimated population at the middle of the year 1911 was 70,100.

At the census in 1881 the population was 27,374; in 1891, 49,217; in 1901, 58,556, and in 1911, 69,881. These enumerations were taken in April.

The rate of increase during the last decade was only 16% compared with 20·7% in the previous intercensal period, hence the population in the intervening years was over estimated and the vital statistics reckoned per 1,000 of the estimated population have required revision.

The number of families or separate occupiers at the census of 1911 was 13,876. There were 34,411 males and 35,470 females.

The details of the age distribution of the population at the last census have not yet been published. Assuming that the distribution in 1911 was

similar to that in 1901, the figures showing the population at each age group at the middle of 1911 are as follow :—

Under 1 year	...	...	...	1,940
1 year and under 2	...	...	...	1,737
2 years and under 5	...	...	...	4,970
Total under 5	...	...	...	8,647
5 years and under 15	...	...	...	15,131
15 „ „ „ 25	...	...	...	14,369
25 „ „ „ 45	...	...	...	19,999
45 „ „ „ 65	...	...	...	10,109
65 „ „ older	...	...	...	1,842
				<u>70,100</u>

At the census of 1901 there were 10,044 inhabited and 550 uninhabited houses.

The following table shows the number of houses erected since that date :—

Year.	Derby.	Stanley.	Mersey.	Knowsley.	Linaere.	Orrell.	Whole Borough
April 1901—April 1902	110	—	8	—	169	—	287
„ 1902— „ 1903	126	28	—	—	85	—	239
„ 1903— „ 1904	91	28	—	30	132	—	281
„ 1904— „ 1905	135	76	—	1	143	—	355
„ 1905— „ 1906	278	52	—	—	214	—	544
„ 1906— „ 1907	190	25	—	—	110	*26	351
„ 1907— „ 1908	73	64	1	—	51	11	200
„ 1908—Jan. 1909	46	52	—	—	14	21	133
Jan. 1909— „ 1910	44	44	—	1	10	1	100
„ 1910— „ 1911	7	15	—	—	6	11	39
„ 1911— „ 1912	19	—	—	—	1	—	20
<hr/>							
	1,119	384	9	32	935	70	2,549

* Included in the Borough in 1906.

In November 1906, there were 810 houses in Orrell.

SOCIAL CONDITIONS AND CHIEF OCCUPATION OF THE INHABITANTS.

At the census of 1901 there were in the town 19,468 wage-earning males. Of these, 3,773 were grouped under the heading “ Dock Labourers, Wharf Labourers ” and 872 as “ General Labourers.” They are mostly engaged in

casual labour, and owing to the irregular nature of their employment, and the fact that the supply of workers exceeds the demand, the average weekly wage of each is low. Hence, most of them live in sub-let houses. As the workers are engaged at four different times during the twenty-four hours; it is essential that the dock labourer should live near the docks.

POOR LAW AND HOSPITAL RELIEF.

The Clerk of the West Derby Board of Guardians has kindly supplied the following information relating to Poor Relief given in the Bootle District during the *half-year*, ended 30th September, 1911.

“(a) Medical Relief only.

Number of individual orders on District Medical Officers :—

District No. 1	...	...	...	...	1,883 patients
„	„	2	...	...	1,327 „
Total ...					<u>3,210</u> „

About 20% of the patients were admitted to the Union Hospitals.

(b) Out-Door Relief (excluding Medical).

Men.	Women.	Children.	
95	...	305	...
			530 — Total, 930.”

During 1911, 1,102 In-Patients and 13,617 Out-Patients were treated at the Bootle Borough Hospital. Many Bootle people also attended the Liverpool Hospitals.

VITAL STATISTICS.

The Vital Statistics of the Registrar-General are, for 1911 and future years, to be published for Sanitary Districts. They were formerly published for Registration Districts only, and were not comparable with the statistics prepared by Medical Officers of Health. Coincidentally with this re-arrangement of districts there has been inaugurated a system of transference of births and deaths to the districts to which these should properly be assigned.

BIRTHS.

During the year 1911, 2,093 births were registered in the district. The Registrar-General informed the Medical Officer of Health of 27 births which occurred in other districts and must be added to those registered in Bootle.

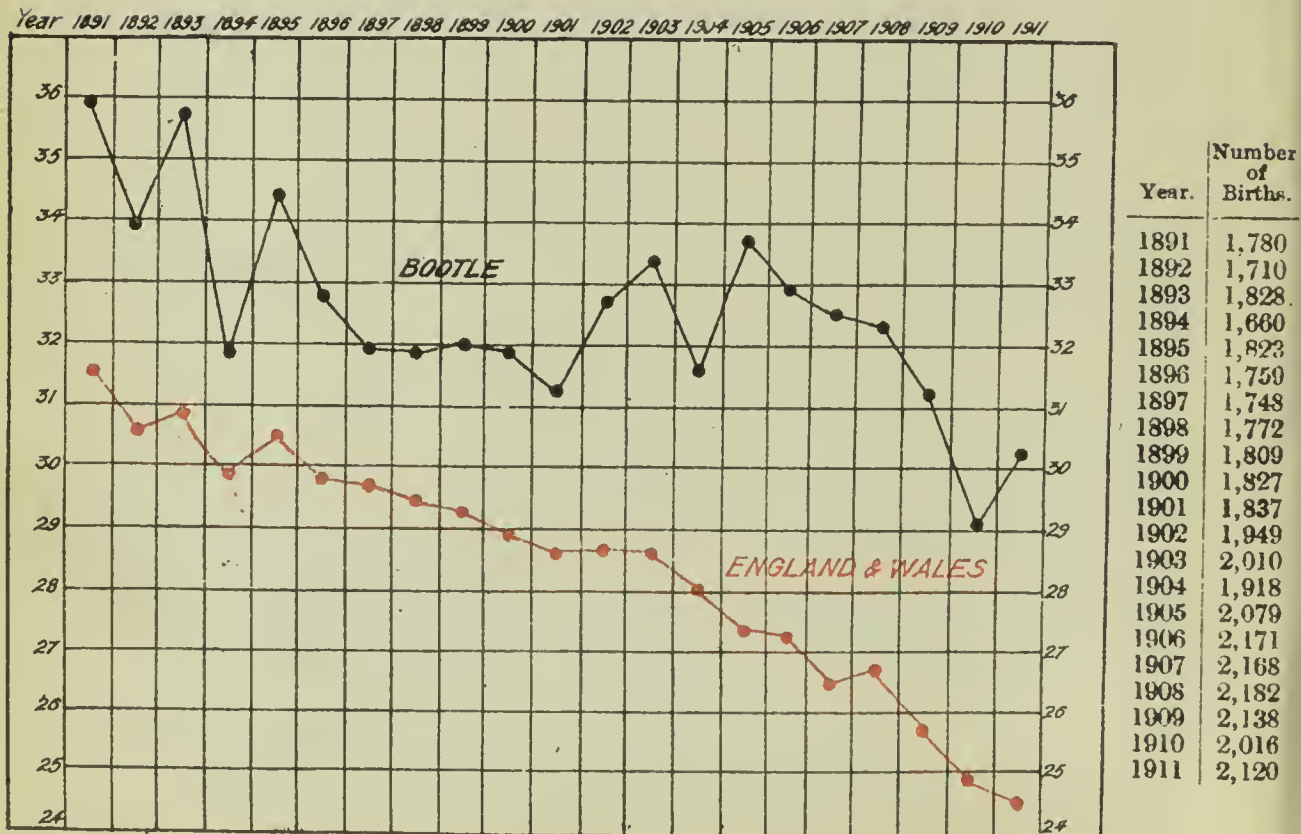
These births are of children whose mothers had their usual residence in this Borough and who were temporarily in other places when the births took place. No births registered in Bootle were transferred to other districts. This is the first year that births occurring in similar circumstances have been transferred to Bootle, hence the birth-rate is not strictly comparable with those of former years.

Of the 2,120 births accredited to Bootle ; 1,074 were of males, 1,046 of females. The birth-rate per 1,000 of the population was 30·2. The average rate for the previous ten years is recorded as 32, but had all the births properly belonging to Bootle been counted, it would probably have been slightly higher.

The birth-rate for England and Wales during 1911 was 24·4 ; for the 77 great towns it was 25·6.

The following chart shows at a glance the variations in the birth-rate per 1,000 of the population of Bootle and of England and Wales during the past twenty-one years.

BIRTH RATES.



The natural increase of the population, that is, the excess of births over deaths, during each year from 1891 to 1910, is given in the following table:—

1891 ... 583	1901 ... 788
1892 ... 723	1902 ... 788
1893 ... 659	1903 ... 871
1894 ... 709	1904 ... 739
1895 ... 713	1905 ... 941
1896 ... 712	1906 ... 962
1897 ... 691	1907 ... 1040
1898 ... 717	1908 ... 957
1899 ... 597	1909 ... 990
1900 ... 586	1910 ... 997
Annual average ... <u>669</u>	Annual average ... <u>906</u>

During 1911 the natural increase of the population was 837.

In the following table the numbers of births registered in the Borough in each quarter of the year are shown, together with the wards in which they occurred:—

Ward	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total.	Birth-rate per 1000 of the estimated Population.
Linacre	123	132	144	126	525	35·9
Orrell.....	37	30	35	36	138	35·1
Derby	105	108	110	113	436	32·5
Mersey	114	84	97	96	391	29·3
Knowsley ...	96	70	85	105	356	28·4
Stanley	66	57	56	68	247	20·0
Whole Borough	<u>541</u>	<u>481</u>	<u>527</u>	<u>544</u>	<u>2,093</u>	<u>29·8</u>

To these must be added the 27 births which occurred in other districts ; the wards in which the mothers of these children resided are not known.

Illegitimate births numbered 66 and were 3·1% of the total.

The average annual number of illegitimate births in the nine preceding years is recorded as 33·6. In 1911 fourteen illegitimate births, properly belonging to Bootle, took place outside the Borough. This is the first year that the number of such births has been known to the Medical Officer of Health, and it shows that the numbers given in previous years were probably much too small.

The Notification of Births Act, 1907, came into operation in Bootle on the 7th of January, 1908. By the provisions of this Act, the Medical Officer of Health should be informed of each birth within thirty-six hours of its

occurrence. Visits are paid by the Lady Inspectors to the mothers of the newly-born children, and advice is given concerning infant care and management.

In some cases notification is not made in accordance with the provisions of the Act, and the birth is not heard of until it is recorded in the returns of the Registrar, some six weeks after the birth of the child. These children are, as a rule, those of better class parents who are attended by private practitioners. It is unfortunate that the Medical Officer of Health has no knowledge of the births which occur in the workhouse. This Institution is situated outside the district. It would be a great advantage if the names and probable addresses of these children, who of all others should receive the attention of the Lady Inspectors, were transmitted to the Health Department at the time of discharge.

NOTIFICATION OF BIRTHS ACT, 1907.

	1908.	1909.	1910.	1911.
Births notified by Medical Practitioners	251...	158...	131...	101
„ „ „ Midwives ...	... 1,476...	1,553...	1,522...	1,560
„ „ „ Others ...	... 155...	58...	37...	66
Total	... 1,882...	1,769...	1,690...	1,727

The number of births registered in the Borough in each of these years has been 2,182, 2,138, 2,016 and 2,093, showing that in 1908 some 300 births were not notified in accordance with the provisions of the Act; in 1909, 369, in 1910, 326 and in 1911, 366. The figures show an evident reluctance on the part of medical men to notify the births which they attend.

DEATHS.

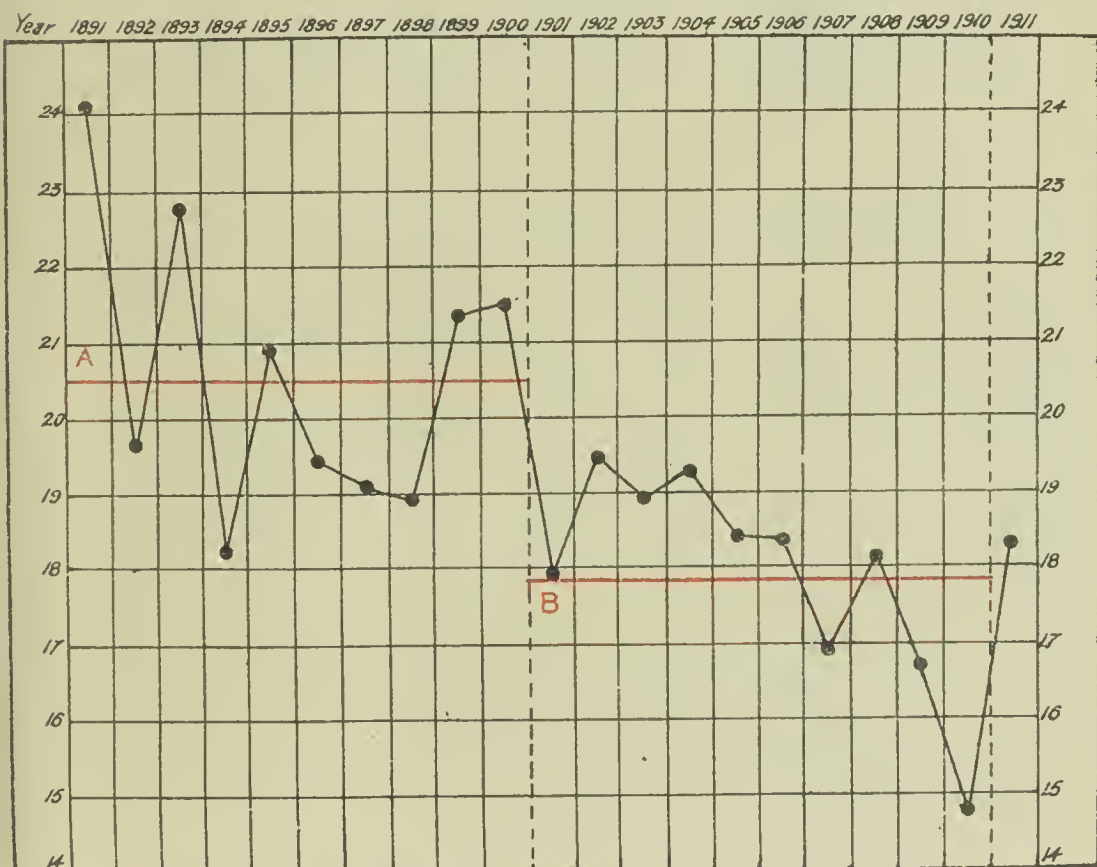
The number of deaths registered in Bootle during the year 1911 was 1,050. This number includes the deaths of 43 non-residents which occurred in the Borough; 32 of these died in the Bootle Borough Hospital. It is now possible to accurately ascertain how many Bootle persons died in other parts of England and Wales: during 1911, the Registrar-General provided the Medical Officer of Health with particulars relating to 276 deaths of persons who had died in other parts of the country and were stated to have been inhabitants of the Borough. When these adjustments have been made, the total number of deaths assigned to Bootle is 1,283, equal to a death-rate of 18.3 per 1,000 of the population. It is thus seen that during 1911 the excess of deaths transferred “in” over deaths transferred “out” is 233. The

corresponding figures for the past five years are 170, 136, 147, 159, and 147, the average for the past ten years is 137. The number of deaths transferred "out" is more or less constant, the great difference is due to the number transferred "in." Hence it is that the death-rate for this year should not be compared with those of former years in which many deaths of residents occurring in other parts of England and Wales were not included in our statistics. "Transferable Deaths" are defined as "deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they usually resided."

The death-rate of England and Wales during 1911 was 14·6. The death-rate of Bootle, when corrected for age and sex distribution was 20·2. The corrected death-rate of the 77 great towns was 16·4.

Chart showing death-rate of the Borough since 1891.

DEATH-RATES.



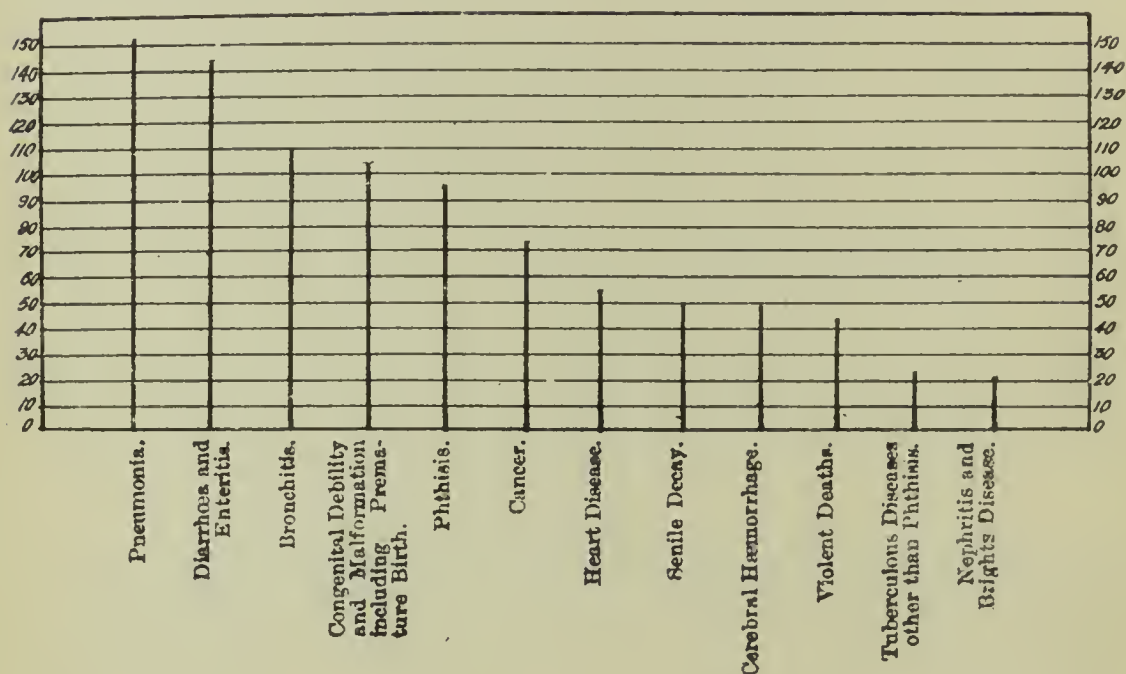
Year.	Number of Deaths.
1891	1,197
1892	987
1893	1,169
1894	951
1895	1,110
1896	1,047
1897	1,057
1898	1,055
1899	1,212
1900	1,241
1901	1,054
1902	1,161
1903	1,139
1904	1,179
1905	1,138
1906	1,209
1907	1,128
1908	1,225
1909	1,148
1910	1,019
1911	1,283

A. —Average death-rate for the 10 years 1891-1900 was 20·5.

B. —Average death-rate for the 10 years 1901-1910 was 17·8.

The rates from 1891-1910 are partially, that for 1911 fully, corrected for "transferable" deaths; they are all uncorrected for age and sex distribution.

COMPARATIVE VIEW OF THE TWELVE PRINCIPAL CAUSES OF DEATH DURING
THE YEAR 1911 : —



MORTALITY IN RELATION TO SEASON.

Ward	QUARTERS.				Total.	Death-rate per 1,000 of the estimated population.
	1st.	2nd.	3rd.	4th.		
Knowsley.....	69	55	85	66	275	21·9
Mersey.....	79	56	64	79	278	20·8
Linacre .. .	67	58	77	64	266	18·2
Derby .. .	58	50	65	46	219	16·3
Stanley . . .	51	39	50	56	196	15·8
Orrell	11	16	14	8	49	12·4
Totals	335	274	355	319	1,283	18·3

INFANTILE MORTALITY.

There were 308 deaths of children under the age of one year ; this is an infantile mortality rate of 145 per 1,000 births.

The average annual rate for the previous ten years was 147 per 1,000 births.

The rates per 1,000 births in the different wards for 1911 and the previous ten years are :—

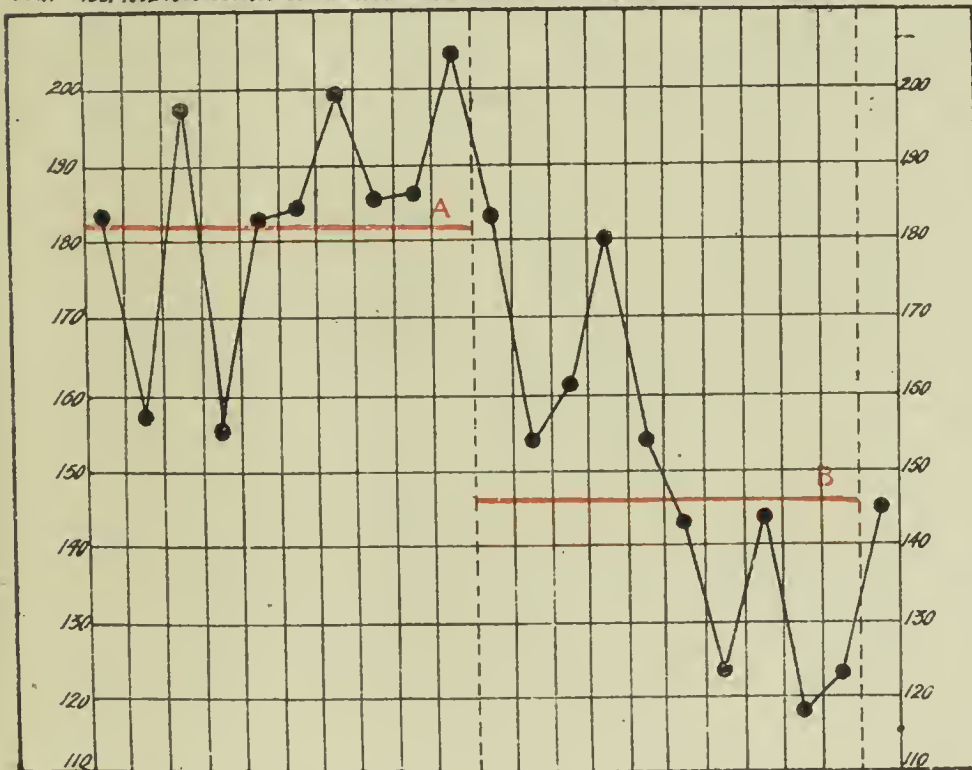
Ward.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	Average for 10 years 1901-10.
Mersey	238	212	164	222	174	177	164	200	185	185	156	191
Knowsley	199	139	162	186	130	156	132	160	129	106	213	149
Stanley	170	136	212	174	161	119	92	111	108	80	157	138
Linacre	160	156	143	158	156	152	115	132	85	106	129	135
Derby	141	113	143	154	150	121	100	109	122	129	112	125
Orrell	—	—	—	—	—	100	144	154	44	123	108	109
Whole Borough	183	154	161	180	154	143	123	143	118	123	145	147

During 1911, the rate of infantile mortality throughout England and Wales was 130 per 1,000 births; in the 77 great towns it was 140,

The rates of infantile mortality for the Whole Borough during the past twenty-one years are shown in the chart :—

RATES OF INFANTILE MORTALITY.

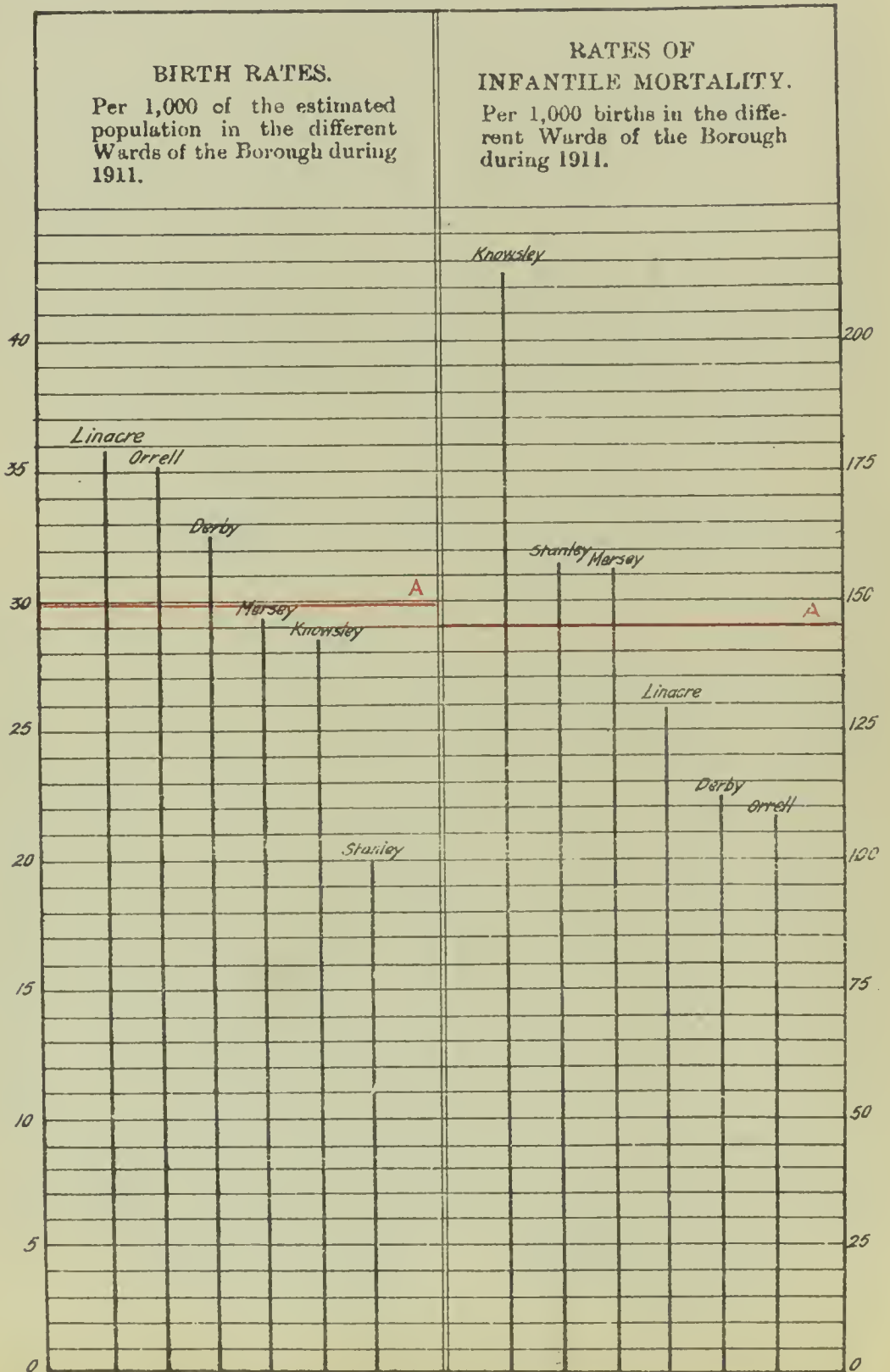
Year 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911



A. —Average rate of infantile mortality during the 10 years 1891-1900 was 183 per 1,000 births.

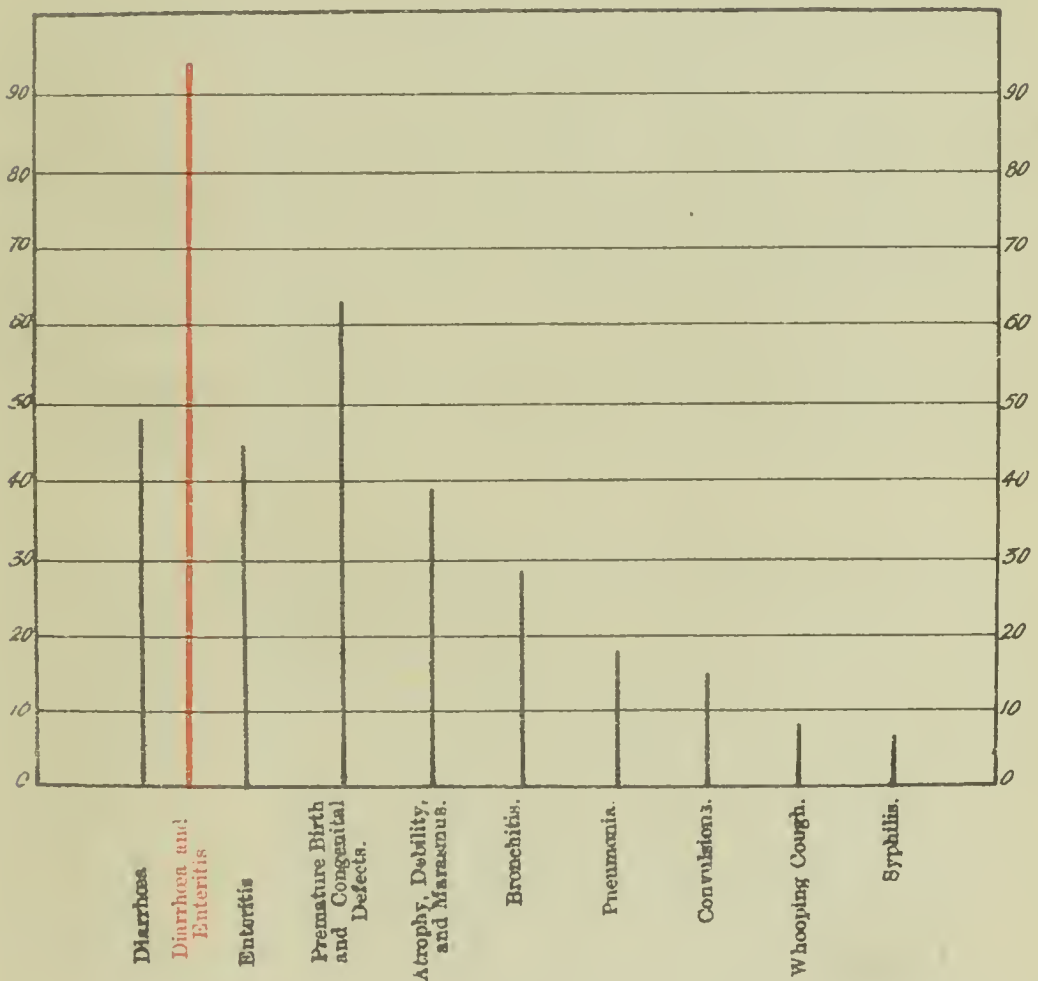
B. —Average rate of infantile mortality during the 10 years 1900-1910 was 147 per 1,000 births.

The following diagram shows in a graphic form these rates for 1911, and also the birth-rates in the various wards :—



The causes of infantile mortality and the ages at death are set out fully in Table 4 at the end of this report.

COMPARATIVE VIEW OF THE PRINCIPAL CAUSES OF DEATHS OF INFANTS BELOW THE AGE OF ONE YEAR DURING 1911:—



Of the 308 deaths, 52 occurred during the first week of life ; an additional 52 did not live beyond the first month. Of these 104 deaths of infants under the age of one month, 51 were due to premature birth, 13 to atrophy, debility or marasmus, and 3 to congenital malformations, a total of 67 due to ante-natal rather than post-natal causes.

The outstanding cause of infantile mortality during the year was diarrhœa and enteritis ; this is dealt with later.

It must on the whole be considered satisfactory, that despite the high atmospheric temperature of the third quarter of the year, the rate of infantile mortality did not reach the high numbers recorded in previous years of similar weather conditions. There is no doubt that this result has been achieved by the efforts of the two Lady Inspectors who regularly visited all children of the poorer class below the age of 12 months. They distribute leaflets and give advice as to the feeding of the children. Another important factor is the work of the Bootle Health Society : this is a voluntary association of Ladies of the town who visit necessitous cases and provide nourishment, when this is required, for both mother and child. A very great amount of good is done by this Society and I trust that its beneficent actions may long continue.

In order to determine the areas of highest infantile mortality in the town with a view to the discovery of the causes of the mortality and their remedies, an analysis was made of the death returns for the five years 1907-1911. By taking the five-yearly period, the probability of error due to dealing with small numbers was to some extent reduced. The number of deaths of infants under the age of one year during this period was 1,392. The mean rate of infantile mortality for the whole borough was 131 per 1,000 births. On distributing the deaths into wards, Mersey easily headed the list with a rate of 183 per 1,000 births (this may be compared with the 10-yearly rate for 1901-1910 shewn on page 15). Knowsley was second but a long way behind with 148. Linacre, Derby and Orrell had rates of 113, 112 and 110. Stanley had the smallest rate, 108.

Mersey Ward is a congested area occupied by the poorest inhabitants of the Borough, most of whom live in sub-let houses ; a great portion of Stanley Ward is "residential" and contains the largest houses in the town. On

analysing the causes of deaths of infants in Mersey Ward, it is rather striking that the diarrhœal mortality in that ward is 14% below the mean, whilst in Knowsley Ward it is 44% above the mean. This is due to the fact that though the inhabitants of Mersey Ward are poorer, as a whole, than those of Knowsley Ward, yet in the former area a larger proportion of the infants are "breast-fed." The percentages of children at the age of six months, fed entirely from the breast were 78 in Mersey Ward and 53 in Knowsley Ward. The infantile mortality in Mersey Ward is proportionately high for marasmus and "wasting" diseases, also for measles and whooping cough. Prematurity and congenital defects accounted for 22% of the total, bronchitis and pneumonia for 20%; these are slightly above the average for the Borough.

Some of the deaths from marasmus and atrophy could probably have been prevented, if greater care in the feeding of the children had been exercised. The instruction given to school girls on Infant Care and Management will prove of value. The Lady Inspectors spend much of their time in instructing mothers on this subject.

In Knowsley Ward the death rates from diarrhœa and from pneumonia were proportionately high.

ZYMOTIC DISEASES.

Table showing number of deaths from the principal zymotic diseases for 1911 and the preceding ten years:—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Average of 10 years. 1901-1910
Smallpox	—	4	6	—	—	—	—	—	—	—	1	1
Scarlet Fever	16	14	25	13	32	14	7	17	16	6	5	16
Diphtheria	11	8	9	19	18	11	14	14	10	6	11	12
Measles	5	46	2	48	9	44	16	34	68	22	21	29
Whooping Cough	6	23	16	41	20	30	28	42	3	32	22	24
Enteric Fever	12	11	12	2	4	7	8	5	2	2	3	6
Typhus Fever	2	4	—	—	—	—	—	1	3	—	—	1
Diarrhœa and Enteritis ...	125	80	101	145	104	114	68	78	79	77	144	97
Total ...	177	190	171	268	187	220	141	191	181	145	207	186
Rate per 1,000 of the population... ..	3.01	3.19	2.84	4.40	3.03	3.34	2.11	2.82	2.64	2.09	2.95	2.91
Rate per 1,000 of the population excluding deaths from diarrhœa and enteritis ... ..	.38	1.85	1.16	2.02	1.34	1.60	1.09	1.67	1.49	.98	.89	1.39

It will be seen that the average annual zymotic death rate for the past ten years has been 2·91 per 1,000 of the population, of which 1·52 was due to diarrhoea and enteritis, and 1·39 to the other diseases enumerated above. During 1911—owing to the prevalence of zymotic enteritis—the total zymotic death-rate was 2·95. Excluding deaths from diarrhoea and enteritis the rate (·89) is the lowest since 1901 when it was ·88.

Table showing number of notifications of infectious diseases received during 1911 and the previous ten years.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	Average for 10 years 1901-10.
<i>Population</i>	58,731	59,436	60,149	60,870	61,601	65,860	66,686	67,523	68,370	69,229	70,100	63,845
Smallpox ...	1	25	122	—	—	—	—	—	—	—	1	14
Scarlet Fever..	285	321	353	269	289	338	257	498	397	288	238	329
Diphtheria in- cluding Croup	64	34	33	48	78	74	52	68	64	54	85	56
Typhus Fever..	12	15	—	—	—	—	—	1	2	—	—	3
Continued Fever	—	—	—	1	—	—	—	—	—	—	—	—
Enteric Fever..	76	62	61	22	24	40	42	30	15	12	16	38
Puerperal Fever	6	1	—	—	—	6	4	8	4	2	5	3
Erysipelas ...	51	50	25	37	32	38	32	34	36	26	33	36
Phthisis ...	22	22	21	40	22	18	7	24	*150	123	†188	—

* Notification of Poor Law cases became compulsory.

† „ „ cases seen at voluntary hospitals became compulsory.

SMALLPOX.

During the year, five cases of this disease were treated at the Corporation Isolation Hospital: one of these patients lived in Bootle. He was a marine fireman who contracted the disease in the United States of America. On March 7th, the Liverpool Port Sanitary Authority reported that a man who gave an address in Bootle had been in contact with a case of smallpox whilst on board a passenger vessel which had left Boston on February 21st and arrived at Liverpool on March 2nd. On the arrival of the ship at Liverpool no intimation of any illness was received by the Port Sanitary Authority, and the crew came ashore in the usual way. On March 3rd one of the crew developed smallpox and was removed to a Liverpool Hospital. It was then difficult to obtain an accurate list of the names and addresses of the crew: 14 “contacts” were notified on March 6th and two additional ones, including the patient, on March 7th. On visiting the address given, the man, aged 30 years, was found ill in bed with the rash of smallpox upon him. The rash had appeared

on March 5th. He was removed from his home to hospital within two hours of the discovery, and the remaining twelve inmates were removed to the Corporation Shelter House, where all were re-vaccinated except one, who refused. They remained there for two days. Meanwhile their house with all its contents was disinfected. The "contacts" were kept under observation for some twenty days, and fortunately no other case occurred. From our knowledge of the incubation period of smallpox, it is probable that the disease was contracted three days before leaving Boston. The patient had been vaccinated in infancy and had not been re-vaccinated. The disease was complicated by pneumonia, which ultimately caused death. During the year, 78 smallpox "contacts" were reported to the Health Department by other Sanitary Authorities and were kept under observation. Whenever smallpox is prevalent, as it was during 1911, in the eastern ports of North America, the town is in some considerable danger of being invaded by the disease. The incubation period of smallpox is twelve days; the duration of the voyage may be much less than this: consequently a person may contract the disease in America and be at home in Bootle some four or five days before he begins to feel ill.

SCARLET FEVER.

During the year 238 cases of scarlet fever were notified. The Ward distribution was:—

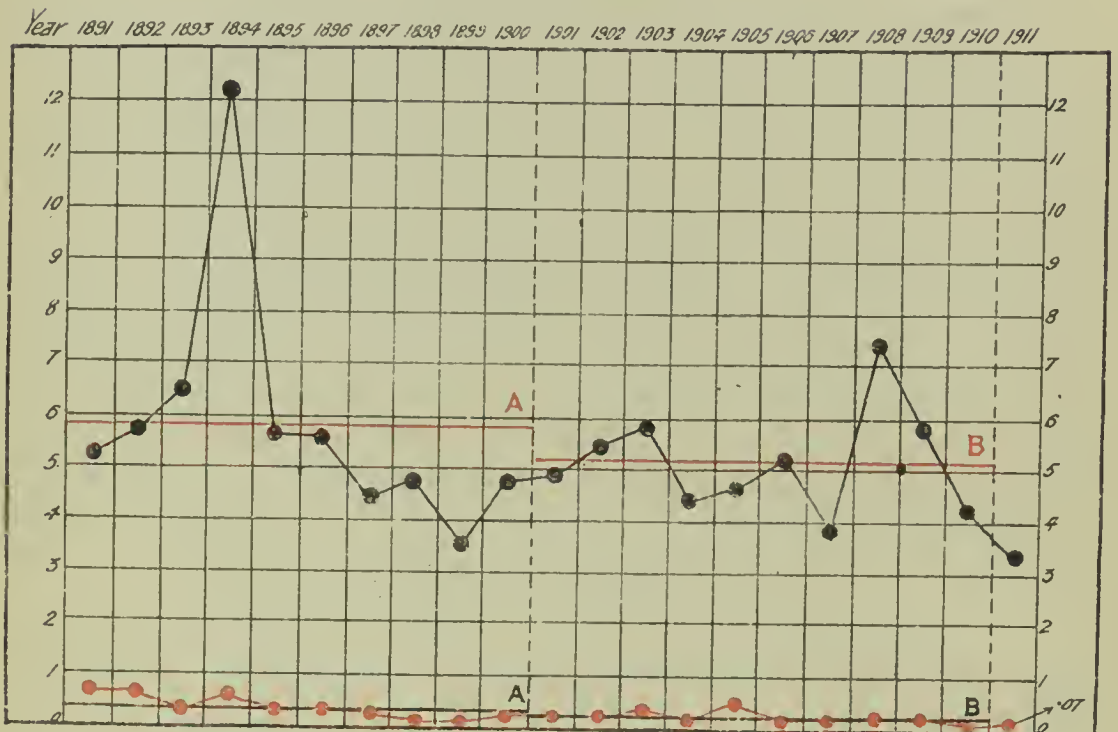
Derby.		Stanley.		Mersey.		Knowsley.		Linacre.		Orrell.
87	...	56	...	10	...	19	...	54	...	12

The table gives a summary of the incidence of the disease since 1891:—

		Cases notified.	Cases notified per 1,000 of the population.		Percentage removed to hospital.		Deaths.	Death-rate per 1,000 of the population.		Percentage of deaths to notifications.			
Annual average for 10 years													
1891-1900	...	309	...	5·8	...	40	...	20	...	·37	...	6·4	
<hr/>													
Annual average for 10 years													
1901-1910	...	329	...	5·1	..	72	...	16	...	·25	...	4·86	
<hr/>													
1911	238	...	3·3	...	74	...	5	...	·07	...	2·1

The chart shows the yearly notification-rate (black line) and death-rate (red line) per 1,000 of the population since 1891 :—

SCARLET FEVER.



A.—Average notification-rate per 1,000 of the population during the 10 years 1891-1900 was 5.8.

B.—Average notification-rate per 1,000 of the population during the 10 years 1901-1910 was 5.1.

A.—Average death-rate during the same period was .37 per 1,000 of the population.

B.—Average death-rate during the same period was .25 per 1,000 of the population.

During 1911 the number of cases notified per 1,000 of the population and also the death-rate from the disease are the lowest in the records of the Borough. During the year five deaths occurred, the death-rate per 1,000 of the population was .07 compared with .05 throughout England and Wales. The type of the disease is now very mild and a case-mortality of 2 or 3% now prevails compared with one of 10 or 12% some twenty years ago. The fact that the cases are mild makes efficient control of the disease a difficult matter.

The symptoms of scarlet fever in some cases are now almost trivial; the danger lies in the fact that these mild cases can infect a debilitated child with a severe form of the disease. In June it was reported, anonymously, that the children in a certain house were ill and that a medical man had not been called in. The Medical Officer of Health visited the house and found a child, aged seven years, who was suffering from the acute stage of scarlet fever; three other children in the house were recovering from the disease, a fifth child, who was attending school, was desquamating. On careful enquiry, a history of previous acute illness and the presence of a rash was obtained in each case. A few days later the two remaining children developed the disease. When the nature of the illness was pointed out, the parents were willing to take the precautions suggested; they had only recently come from the country and were unaware of the seriousness of their neglect to obtain proper medical attention.

During November an increased number of notifications of scarlet fever and diphtheria were received concerning children who had attended Bedford Road Council School. On November 28th every child in the infants' department was examined by the Medical Officer of Health or the Medical Inspector of Scholars. All children who were suffering from sore throat or other symptoms suggesting infectious disease were sent home. The head teacher was requested to exclude any child who developed a suspicious symptom and to inform the Medical Officer of Health. A Lady Inspector frequently visited the excluded children, explained the reasons for the exclusions and advised the parents to call in a medical man. The head-mistress was asked to refuse to re-admit any child unless a medical man had certified the case to be free from infection. If the parents were unable or unwilling to obtain a certificate from a private practitioner, the children were seen at the Town Hall. The results warrant a further trial of this method of dealing with a school outbreak. From November 9th to the 27th, twelve notifications had been received concerning children who had attended that department. The

inspection was made on November 28th: amongst the children excluded in the manner indicated, two cases occurred. One child kept at home by her mother developed scarlet fever. Only one further case was notified until after the Christmas Holidays.

One of the excluded children was found to be desquamating when brought to the Town Hall for certification as free from infection; enquiry revealed the fact that a transient rash had been present some days previously. The case was regarded as one of mild scarlatina.

A great advantage of exclusion of suspected cases over school closure is that in the former method children, who are ailing, are brought to the notice of the Health Authorities.

An Inspector makes enquiries into each notified case; when other children are at home, he occasionally visits the house and urges the parents to consult a medical man if any untoward symptom appears. He also visits the homes of all patients recently discharged from hospital. Printed and verbal instructions are given to parents on the discharge of their children, pointing out the desirability of keeping the patients for some days away from other children, but these are seldom observed.

Forty-eight notifications were received during the first quarter; 58, 67 and 65 during the second, third and fourth.

The age distribution of the cases is shown in Table 2 at the end of this report; 73 cases, of whom four died, occurred in children below school age, 150 cases with one death in school children and 15 cases with no death in those above school age.

The case-mortality amongst the younger children was thus 5·4%; amongst those attending school it was ·66%. It does not follow that because the case-mortality is so small we should relax our efforts to stamp out the disease from the schools, because it not infrequently happens that a school child, suffering from a mild form, infects a younger brother or sister with a severe type.

A table is given which shows the incidence of the disease in each of the Public Elementary Schools of the Borough.

SCARLET FEVER.

SCHOOL.	Accommodation.	Average number of children on rolls.	Average Attendance.	Number of cases reported during the				Totals for the year.	Attack-rate per 100 scholars on the rolls
				1st qr.	2nd qr.	3rd qr.	4th qr.		
Linacre	975	962	854	5	17	15	5	42	4.37
Bedford Road ..	1,255	1,362	1,220	2	1	8	19	30	2.2
Christ Church ...	762	818	739	6	1	8	1	16	1.95
Gray Street ...	949	979	903	1	5	1	1	8	0.81
Orrell	1,020	736	666	2	—	2	1	5	0.68
St. Mary's... ..	875	921	792	1	3	1	1	6	0.65
Hawthorne Road ...	924	973	873	2	—	3	1	6	0.61
St. John's... ..	794	859	728	3	—	1	1	5	0.58
Salisbury Road ...	1,385	1,449	1,312	6	1	—	1	8	0.55
St. James'	1,405	1,586	1,373	2	2	2	1	7	0.44
St. James' Select ..	473	454	388	—	1	1	—	2	0.44
St. Winefride's ...	898	890	793	—	—	—	—	—	—
Total for the Elem. schools .	11,715	11,989	10,641	30	31	42	32	135	1.35
Boys' Secondary School	—	—	—	—	—	—	1	1	—
Girls' „ „	—	—	—	—	—	—	1	1	—
Five Private Schools	—	—	—	1	—	5	1	7	—
Four Schools outside Borough	—	—	—	—	2	3	1	6	—
	—	—	—	31	33	50	36	150	—

It is a curious fact that the greatest incidence occurs in the schools attended by the better-class children, and those schools with the least incidence are attended by children of the poorest parents. Multiple cases in the same family have materially increased the figures for Linacre and Bedford Road Schools.

“RETURN” AND MULTIPLE CASES.

“RETURN” CASES—These are cases of scarlet fever notified shortly after the return home from hospital of a patient there treated for the disease; there were six such during the year, which is 3.4% of those discharged from hospital. The days elapsing between the discharge from hospital of the supposed infecting cases and the notification of the corresponding return cases were 10, 15, 16, 25, 26 and 28. It is not improbable that in at least the last

three cases, the infecting case was not the child recently returned from hospital. In this connection it is interesting to note that twenty subsequent cases occurred in houses from which a case of scarlet fever had previously been removed to, and was still being treated in, hospital. There were 251 susceptible children in these houses. Eleven of these cases were notified within a week of the first case; the remaining nine at intervals varying from ten to fifty-five days; in the last case, had the first child returned home a few days earlier, the patient would have been counted as a "return" case. Five subsequent cases were reported from the houses in which the first case was nursed at home; there were fifty-nine susceptible children in these houses. It was only where isolation was considered to be efficient that the patients were not removed to hospital.

Total number of houses where :—	No. of houses.		Cases nursed at home.		Cases sent to Hospital		Total cases.
One member of family attacked	156	...	41	...	115	...	156
Two members ,, ,, ,,	23	...	12	...	34	..	46
Three ,, ,, ,, ,,	4	...	3	...	9	...	12
Four ,, ,, ,, ,,	3	...	5	...	7	.	12
Five ,, ,, ,, ,,	1	...	—	..	5	...	5
Seven ,, ,, ,, ,,	1	...	—	...	7	...	7
	188	...	61	...	177	...	238

Multiple cases occurred in thirty-two dwellings which represent 17% of the infected houses. The total number of cases which occurred in these houses was eighty-two. In eighteen cases, notifications were received at the same time concerning two or more members of the same family.

DIPHTHERIA.

Eighty-five cases of this disease were notified during the year.

The ward distribution was :—

Derby.		Stanley.		Mersey.		Knowsley.		Linacre.		Orrell.
32	...	28	...	3	...	11	...	10	...	1

Twenty notifications were received during the first quarter: twenty, seventeen, and twenty-eight in the second, third and fourth.

The age distribution of the cases is shown in Table 2 at the end of this report. Thirty-six cases with seven deaths occurred in children below school age; forty-two cases with one death in children of school age; seven cases and no death in persons above school age.

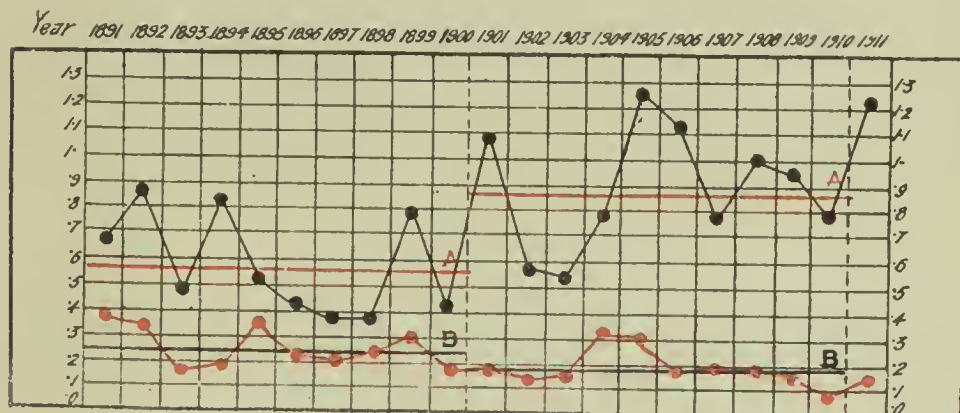
The case mortality amongst the younger children was thus 19% ; amongst those of school age it was 2·3%. Three of the deaths registered during the year were of cases notified during 1910 ; their ages were nineteen, six and four years respectively.

During the year ten deaths were certified to be due to diphtheria ; three others to "croup." Of the three cases of croup, one had been notified under the provisions of the Infectious Disease (Notification) Act. On enquiry the other two were stated to be non-diphtheritic. The eleven deaths represent a death-rate of 0·15 per 1,000 of the population. Throughout England and Wales the corresponding rate was 0·13.

The average number of notifications of diphtheria received during the the ten years 1891-1900 per 1,000 of the population was ·56 ; during the ten years 1901-1910, it had increased to ·87 ; while last year it was 1·21 which nearly approaches the maximum of 1·26 recorded in 1905.

The chart shows the yearly notification-rate (*black line*) and death-rate (*red line*) per 1,000 of the population since 1891.

DIPHTHERIA AND CROUP (MEMBRANOUS).



A.—Average notification-rate per 1,000 of the population for the 10 years 1891-1900 was ·56.

B.—Average death-rate for the same period was ·24.

A.—Average notification-rate per 1,000 of the population for the 10 years 1901-1910 was ·87.

B.—Average death-rate for the same period was ·18.

Table giving particulars of the cases of diphtheria and membranous croup notified during the past year and the preceding ten years :—

	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	Average for 10 years 1901-1910.
Number of cases notified	64	34	33	48	78	74	52	68	64	54	85	56
Number of deaths	... 11	8	9	19	18	11	14	14	10	6	11	12
Death-rate per 1,000 of the population	... 18	13	14	31	29	16	20	20	14	08	15	18
Number of cases admitted to hospital	... 45	25	20	35	49	42	36	37	42	39	60	37
Number of deaths in Corporation Hospital	7	2	4	12	9	7	7	6	5	4	6	6.3
Number of cases requiring tracheotomy	... 11	8	4	9	8	11	8	1	3	4	9	6.7
												1901-1910. 1911.
Average Case-Mortality amongst those nursed at home	... ..								= 27.2%		20 %	
Average Case-Mortality amongst those treated in hospital	... ..								= 17.9%		6.6%	
Average Total Case-Mortality	... ..								= 21.6%		9.4%	

* Of the 11 deaths registered in 1911, 3 were of cases notified in 1910; of the 85 cases notified in 1911, 8 died, the remainder had all recovered at the time of writing.

During the last quarter, ten cases occurred amongst the children attending one school. The other cases were scattered throughout the town. Enquiries were made in each case, but in a large percentage the source of infection could not be traced. In only 25% of the cases was a more or less definite source discovered in the form of a person who had been notified as a case of diphtheria and who had been in contact with the patient. In twenty-two houses in which a case of diphtheria had occurred, some defect, usually of a minor character, was found in the drains.

The failure to find a source of infection in so many cases causes one to think that there must be some "carrier" cases in the Borough; "carrier" cases are persons who though apparently in normal health, have the germs of diphtheria in their throats. These people have sometimes had an attack of diphtheria and the organisms still remain: in other cases the "carrier" has never to his knowledge had the disease. The danger arising from these persons is that they may infect other people, and in them an ordinary (more or less severe) attack of diphtheria ensues.

A great Public Health problem is to detect and supervise "carrier" cases who have been discovered to harbour the bacilli not only of diphtheria but also of typhoid fever. In Bootle no bacteriological method was used for the detection of carriers, but all cases discharged from the Corporation Isolation

Hospital were ascertained to be free from the bacillus. A method adopted in some towns is to take a swab from the throat of each person who has been in contact with a case of the disease and examine it for the presence of the organism.

During the year, 124,000 units of diphtheria anti-toxin were supplied gratis to medical men for the use of their more necessitous patients; thirteen practitioners availed themselves of this privilege on behalf of seventeen patients.

In diphtheria, multiple cases are not so common as in scarlet fever; the following table shows the incidence of these cases:—

	No. of houses.	Cases nursed at home.	Cases removed to Hospital.	Total Cases.
One member of family attacked ...	70	21	49	70
Two members ,, ,, ,, ...	6	4	8	12
Three ,, ,, ,, ,, ...	1	—	3	3
	77	25	60	85

Of the multiple cases, in five instances two notifications were received together; in one house one of the children contracted diphtheria in May, another in November: in the house in which the three cases occurred; the first child became ill on October 11th and was removed to hospital, a second child developed the disease on October 16th, and the third on November 29th, fifteen days after the discharge of the first two cases from hospital.

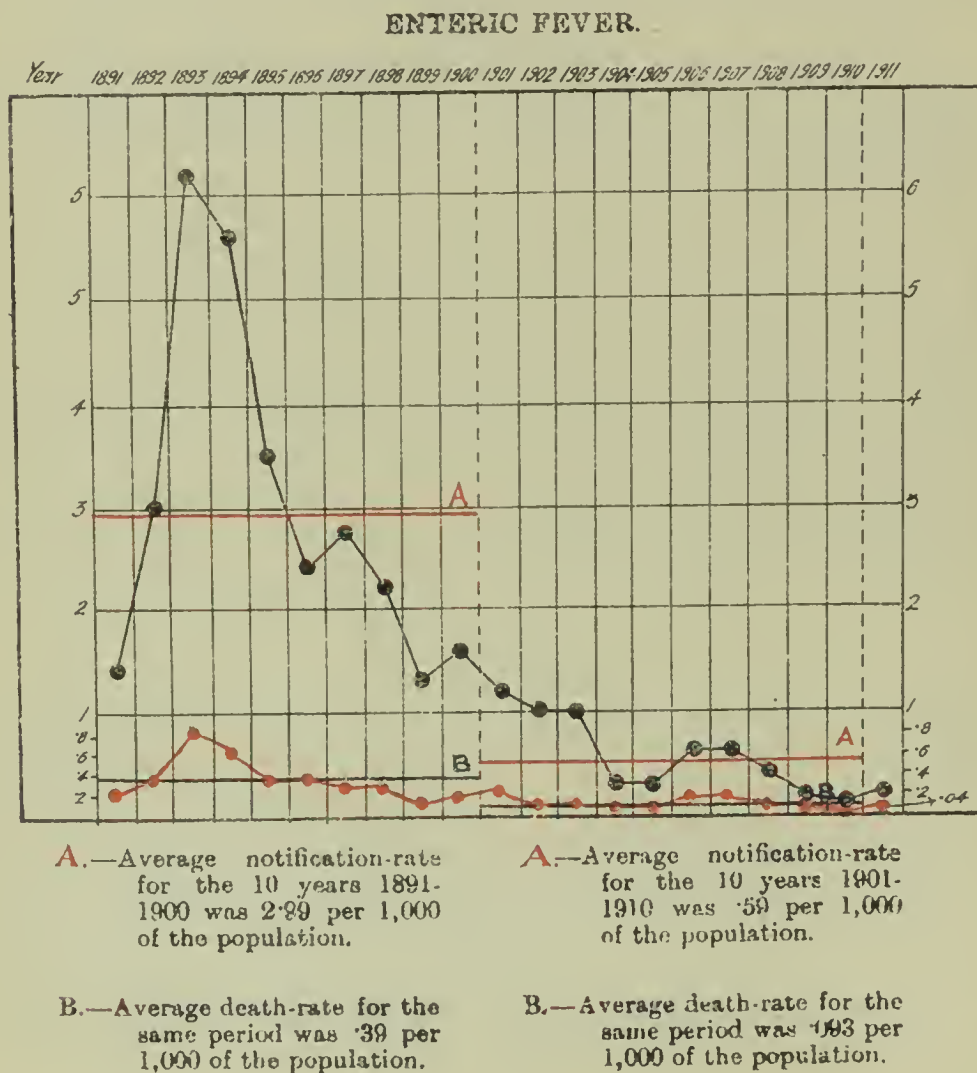
ENTERIC FEVER.

During the year, sixteen cases of enteric fever were notified, of whom twelve were removed to the Corporation Hospital. Bacteriological confirmation of the diagnosis was obtained in five of these latter cases. Three cases of typhoid fever died during the year: one of these was a foreigner who contracted the disease on board a French steamer. In the other cases the source of infection could not be ascertained. The three deaths represent a death rate of .04 per 1,000 of the population, which compares favourably with the rate of .07 for England and Wales. Of the cases who recovered, three were sailors who were infected in foreign ports. The infecting agent in the remaining cases was not discovered. The conversion of privies into water-closets, which was commenced in 1893 and completed in 1906, has been

more than justified by the diminished sickness and death-rates from enteric fever alone. The Corporation paid half the cost of the conversions. Since the inclusion of Orrell in the Borough, the privies of that district have been practically all abolished.

As will be seen from the chart, there has been an annual saving of many lives since the conversion of privies into water-closets was commenced.

The chart shows the yearly notification-rate (*black line*) and death-rate (*red line*) per 1,000 of the population since 1891.



TYPHUS FEVER.

No case of this disease has been reported since 1909.

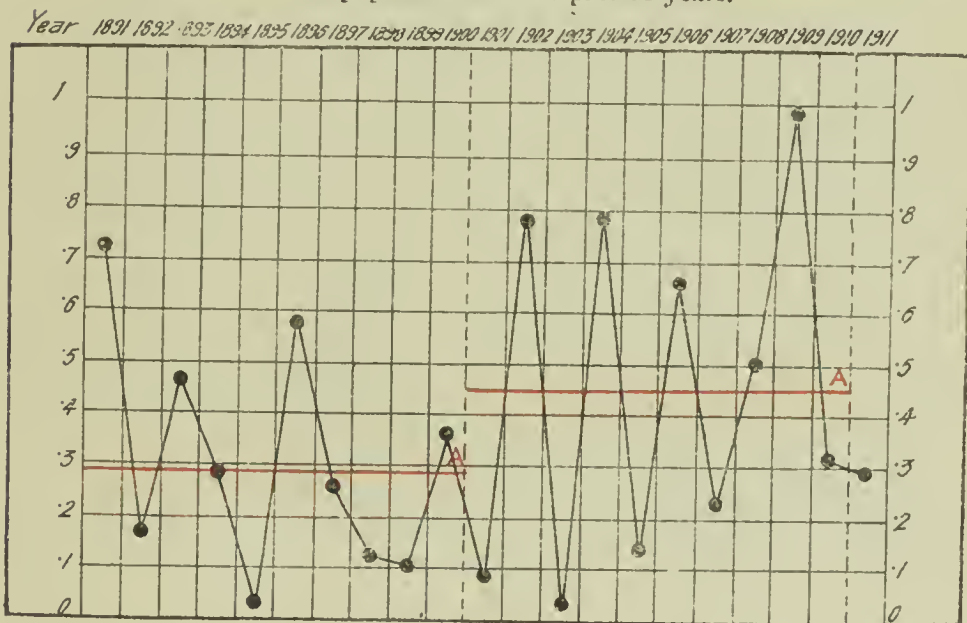
MEASLES.

Measles caused twenty-one deaths during the year 1911.

The death-rate per 1,000 of the population was 0.29, and compares favourably with that for England and Wales which was 0.36. A chart is given which shows the mortality from this disease in Bootle since 1891.

MEASLES.

Chart showing the number of deaths from Measles per 1,000 of the population for the past 21 years.



A.—Average death-rate from Measles per 1,000 of the population for the 10 years 1891-1900 was .29.

A.—Average death-rate from Measles per 1,000 of the population for the 10 years 1901-1910 was .45.

The following table shows the mortality-rate from measles at different age groups :—

Age.	Under 1 year	1 to 2	2 to 5	5 to 15	Over 15 years.			
Number of Deaths ...	3	11	...	5	...	2	...	—
Death-rate ...	1·4	6·3	...	1·0	...	0·13	...	—
	Per 1,000 births.	Per 1,000 of the estimated population at these age groups.						

It will be seen that for the past few years the disease has shown a tendency to have a low and high mortality in alternate years. But for the past two years the mortality has been below the average, and it may be that a few years' freedom from heavy mortality as between 1896 and 1902 is at hand. But any infectious disease which caused twenty-one deaths in the past year and 294 deaths in the previous ten years must be regarded as a serious one.

As measles is not compulsorily notifiable, the number of cases is not known: even if notification were required it is probable that at least a large minority would not be notified, as it is considered a minor ailment, or a necessary evil, in most households, and a doctor is not called in. During the year 544 cases came to the notice of the Health Department as the result of information received from the Head Teachers or the Secretary for Education. All these cases were visited by the Health Visitors. Leaflets and instruction concerning the dangers of the disease were given to the parents. The value of this work is shown by the fact that though so many cases occurred, nevertheless, the number of deaths is below the average of the past ten years. Of the 2,920 school children examined in 1911, 64% had suffered from measles before commencing school life; of 1,141 children aged 13 or 14, 5% had had the disease during school life. Measles is not infrequently complicated by broncho-pneumonia, and when this occurs in a young child it is apt to have a fatal termination. When such a case occurs in a house in the poorer quarter of the town, the skilled and constant nursing which is required cannot be obtained. It is very desirable that the Corporation should provide accommodation for such cases in their isolation hospital. This is already done in many towns.

WHOOPIING COUGH.

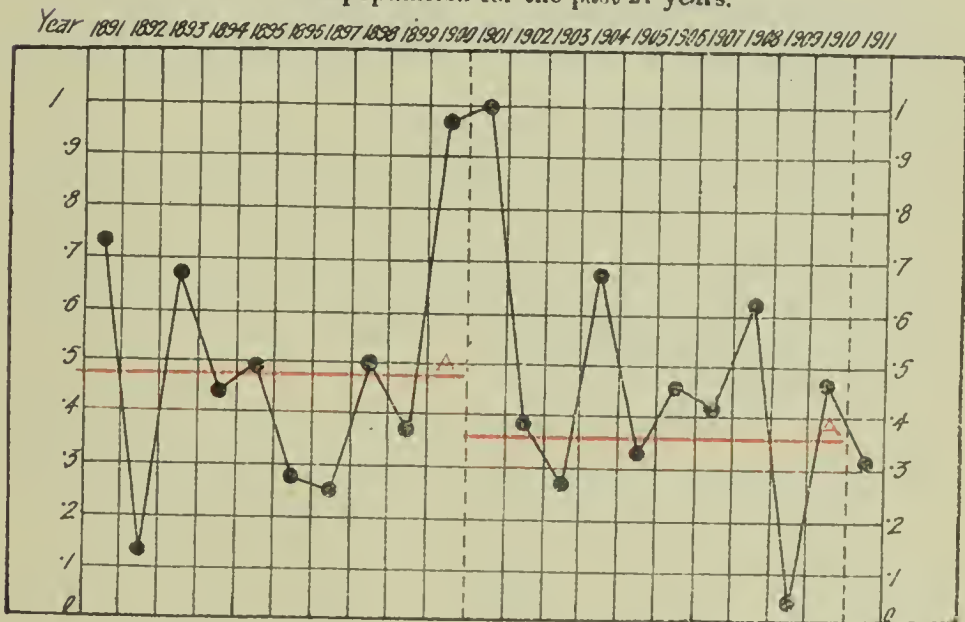
Whooping Cough caused twenty-two deaths during the year 1911. This is equal to a rate of ·31 per 1,000 of the population.

The death-rate from this disease throughout England and Wales was 0·21 per 1,000.

The death-rate for each year since 1891 is shown in the chart.

WHOOPIING COUGH.

Chart showing the death-rate from Whooping Cough per 1,000 of the population for the past 21 years.



A.—Average death-rate from Whooping Cough per 1,000 of the population for the 10 years 1891-1900 was 48.

A.—Average death-rate from Whooping Cough per 1,000 of the population for the 10 years 1901-1910 was 37.

The numbers of deaths at each age group and the death-rates in these groups are as follow :—

Age.	Under 1 year.	1 to 2.	2 to 5.	5 to 15.	Over 15.
Number of Deaths ...	8	5	8	1	—
Death-rate ...	3·7	2·8	1·6	0·6	—
	Per 1,000 births.	Per 1,000 of the estimated population at these age groups.			

Fifty-eight cases were notified to the Health Department by the Education Authority. As in cases of measles, an inspector visited each patient notified and gave instructions concerning isolation. The parents are also recommended to call in the aid of a medical man, and sometimes this advice is acted upon. Efficient control of this disease is quite as difficult as in the case of measles. Parents regard it with a little more respect than the latter disease, but they do not, as a rule, call in a doctor until the children are very ill with some complication. Forty per cent. of the school children medically examined last year had suffered from whooping cough before admission to school: 1% of those about to leave school had had the disease during their school life.

CASES OF INFECTIOUS DISEASES REPORTED BY THE EDUCATION AUTHORITY.

The following table shows the numbers of cases of infectious diseases notified by the Education Authority to the Medical Officer of Health and the numbers of visits paid to them.

			Measles.	Chicken Pox.	Whooping Cough.	Mumps.
Salisbury Road	...	...	105	11	9	—
Hawthorne Road	...	...	29	1	1	—
Linacre Lane	...	...	47	6	15	2
Bedford Road	...	...	11	2	8	22
Gray Street	...	...	79	2	5	1
St. James'	...	...	77	5	6	—
St. Mary's	...	...	134	5	7	12
Christ Church	...	...	9	8	1	1
St. John's	...	...	17	2	1	24
St. Alexander's	...	...	—	—	1	2
St. Winefride's	...	...	8	1	3	1
St. James' Select	...	...	1	—	—	—
Orrell	...	...	27	—	1	—
Totals			544	43	58	65
Numbers of visits and re-visits			818	138	162	162

SCHOOLS.

The schools are regularly inspected and several minor defects have been rectified during the year. The Medical Officer of Health is the School Medical Officer and full details of the work of inspection of schools and scholars are given in his report to the Local Education Authority.

DIARRHŒA AND ENTERITIS.

The occurrence of this disease in epidemic form was, from the point of view of Public Health, one of the salient features of 1911. The official classification includes deaths from gastro-enteritis, gastro-intestinal catarrh, muco-enteritis and colitis. In this portion of the report, to save repetition, the term "diarrhœa" is used to include enteritis and all the above-named diseases.

The deaths numbered 144, which is a rate of 2·05 per 1,000 of the population; the age distribution and death-rate per 1,000 are given.

	Under									65 and
Age in years...	1	.. 1-2	... 2-5	... 5-15	15-25	... 25-45	... 45-65	... upwards.		
Number of										
deaths...	93	... 29	... 6	... 2	... —	... 1	... 7	... 6		
Death-rate	43·8	... 16·6	.. 1·2	... 0·13	... —	... 0·05	... 0·69	... 3·2		
per 1,000										
births.										

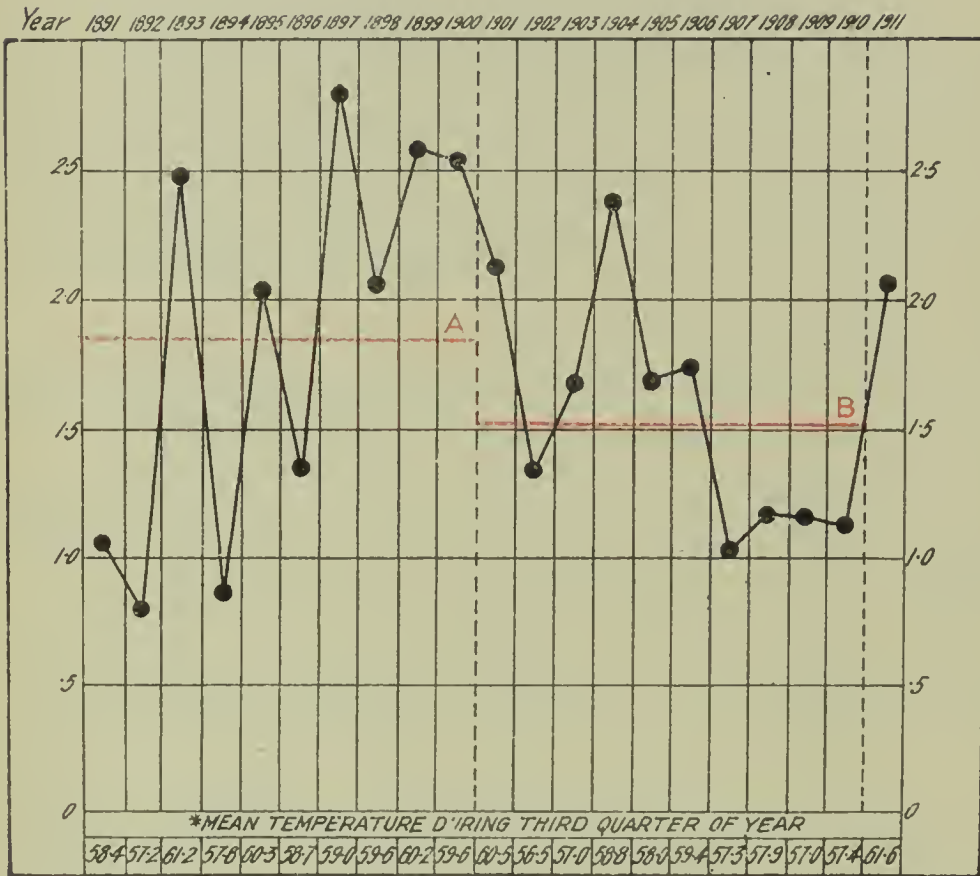
per 1,000 of the estimated population
at these age groups.

The death-rate due to diarrhœa occurring in children under the age of two years was 1·74 per 1,000 of the total population. The corresponding death-rate throughout England and Wales was 1·06, and in the 77 great towns it was 1·31.

The chart shows the death-rate from diarrhœa at all ages for the past 21 years. Diarrhœa secondary to any well defined cause is not included.

DIARRHŒA AND ENTERITIS.

Chart showing the death-rate from diarrhœa and enteritis per 1,000 of the population.



A.—Average death-rate from these diseases for the 10 years 1891-1900 was 1.87 per 1,000 of the population.

B.—Average death-rate from these diseases for the 10 years 1900-1910 was 1.51 per 1,000 of the population.

*Supplied by Mr. Plummer, M.A., of the Bidston Observatory.

Table showing the monthly deaths from diarrhœa during 1911 with particulars of the temperature and rainfall.

	Mean monthly temperature.	Difference from mean of past 25 years.	Inches of rain.	Difference from mean of past 25 years.	Deaths from diarrhœa and enteritis.	
					Under 2 years.	At all ages.
January	40·8° F.	+1·5	·64	-1·5	2	3
February	41·3 „	+1·3	1·84	+0·11	0	0
March	42·3 „	+0·2	1·13	-0·65	2	2
April	45·7 „	-0·9	1·80	+0·23	2	2
May	55·6 „	+4·1	0·59	-1·27	2	3
June	57·8 „	+0·2	2·34	+0·17	1	2
July	63·5 „	+3·2	0·47	-2·43	16	19
August	64·6 „	+4·7	3·11	+0·03	53	60
September	56·9 „	+0·8	5·11	+2·15	32	38
October	49·3 „	+0·1	2·47	-1·07	8	10
November	43·3 „	-0·8	2·19	-0·46	3	3
December	43·4 „	+3·2	3·58	+1·12	1	2

The mean monthly temperature and the rainfall were recorded at the Liverpool Observatory (Bidston).

The occurrence, or otherwise, of an epidemic of this disease seems to depend largely on the atmospheric conditions prevailing during July, August and September.

The table shows that 88% of the deaths were registered during the four months, July, August, September, and October.

The nearest place at which observations of the 4-feet earth temperature were taken was Southport, some 16 miles away.

The mean monthly 4-feet earth temperatures there recorded were:—

May.	June.	July.	August.	September.	October.	November.
52 ...	58·1 ...	60·8 ...	63·2 ...	60·1 ...	53·2 ...	47·1° F.

The following table shows the weekly temperature and rainfall, and also the number of deaths from diarrhœa during twenty-two weeks of prevalence of the disease.

The 23rd week began on June 5th. The 44th week ended on November 4th.

Table showing relationship between deaths from diarrhoea, and temperature and rainfall:—

Weeks of year ...	23rd	24th	25th	26th	27th	28th	29th	30th	31st	32nd	33rd
Deaths from											
Diarrhoea	0	1	1	0	2	1	4	6	12	11	13
Mean Temperature	59.9	55.8	57.9	54.5	59.4	64.4	63.3	66.9	66.6	66.7	66.4
Inches of rain	0	.53	1.16	.58	.01	0	.14	.16	1.71	.32	0
Weeks of year ...	34th	35th	36th	37th	38th	39th	40th	41st	42nd	43rd	44th
Deaths from											
Diarrhoea	10	22	11	12	5	6	7	0	3	2	1
Mean Temperature	62.7	61.7	60.6	57.5	54.0	54.4	48.6	49.1	53.7	47.1	47.5
Inches of rain	.71	.47	.21	1.52	1.24	2.13	.23	0	.25	1.59	1.04

The average duration of the illness is from one to two weeks. The deaths which are recorded in the weekly returns occurred during the week preceding the date of the return. Therefore, the date of onset of the disease is some two or three weeks before the deaths are recorded. The mean temperatures for the three weeks preceding the 23rd were: 20th week 54.5° F.; 21st 56°; 22nd 65°.

It is evident that the very high temperatures of 65° and 59.9° recorded in the 22nd and 23rd weeks were not of themselves capable of causing the disease to become epidemic, for during the next five weeks only five deaths were registered. It is evidently necessary, as was suggested by Ballard many years ago, that the soil should become heated before the disease can become epidemic. The fact that July was a very dry month was probably responsible, to some extent, for the epidemic. During that month the rainfall was 0.47 inches; the average of the previous five years was 2.55 inches. The rainfall during August and September was greater than the average of previous years.

As has been the custom since 1907, medical practitioners were requested to notify during July, August, and September all cases of summer diarrhoea in which the services of a Lady Inspector would be useful and welcome. A fee of 2s. 6d. was paid for each of the 126 notifications received.

Ninety-three deaths of infants under the age of one year were due to diarrhoea; the following is a list of the Streets and Wards in which they occurred:—

Number of deaths in each street.		Total.
KNOWSLEY WARD :—		
3	Denbigh St.	3
2	Bala St., Bangor St., Boreland St., Milton St., Nevada St., Oregon St.	12
1	Blair St., Boston St., Browning St., Clifford St., Conway St., Flint St., Stafford St., Strand Rd., Talbot St. ...	9
		— 24
DERBY WARD :—		
3	Brookhill Rd., Hawthorne Rd.	6
2	Litherland Rd., Lunt Rd., St. Andrews Rd.	6
1	Cedar St., June St., Leicester Rd., Park St., Somerset Rd., Spring Grove	6
		— 18
STANLEY WARD :—		
7	Olivia St.	7
1	Beatrice St., Benedict St., Bianca St., Gonville Rd., Hero St., Orlando St., Queen's Rd., Stanley Rd., Ursula St.	9
		— 16
MERSEY WARD :—		
2	Kirk St., Matthew St.	4
1	Berry St., Camden St., Church St., Derby Rd., Emley St., Hamlet St., Mann St., Miller's Bridge, Pleasant Grove, Regent Rd., William Henry St.	11
		— 15
LINACRE WARD :—		
3	Salisbury Rd.	3
2	Moore St., Rimrose Rd., Tennyson St.	6
1	Akenside St., Balfour Avenue, Beattie St., Chesnut Grove, Hood St., Longfellow St.	6
		— 15
ORRELL WARD :—		
1	Arvon St., Edith Rd., Elizabeth Rd., Mary Rd., Willard St.	5

All deaths due to diarrhœa in infants were investigated. It was found that diarrhœa often supervened on another disease such as marasmus; in these cases the death was counted in the returns as due to "diarrhœa."

The following particulars concerning the ninety-three infants who died are of interest :—

17 were said to have been fed from the breast only,

24 had been fed from the bottle since birth,

52 had been fed partly from the breast and partly from the bottle.

Seventeen of the infants had been recently weaned.

Since more children are fed from the breast than from the bottle, the incidence of the disease was much greater among the bottle-fed than the

breast-fed, but it is a surprising fact that so many as seventeen were reported to have been breast-fed only. The explanation seems to be that these children were infected not by the common source, their food, but by some other agent. Dirty fingers, "dummy teats" dropped on the floor and immediately afterwards pushed into the baby's mouth, readily suggest themselves as causes. In nearly every case in which a feeding bottle was necessary, the boat shaped variety was in use: these are supplied to necessitous mothers free of charge.

In each of five families three or more of the children whilst under the age of one year had died of diarrhœa.

Number of children originally in family.		Number dead.		Number who died of diarrhœa.	
8	...	4	...	4	
7	...	5	...	3	
7	...	4	...	3	
6	...	4	...	3	
5	...	3	...	3	

The number of rooms occupied by the 93 families in which the deaths occurred were:—

1 room.	2 rooms.	3 rooms.	4 rooms.	more than 4 rooms.
5	21	8	21	35

Three infants contracted the disease whilst in an Institution.

The disease was by no means confined to the poorest classes, as is evidenced by the fact that parents of the majority of the children lived in houses containing more than four rooms.

The following sanitary defects were noted in the houses visited:—

Defective yard surfaces	6
Complaints <i>re</i> ash-pits...	10
Other complaints	6

Ten of the houses were reported to be very dirty. Four of the infants were illegitimate.

The length of illness in the fatal cases was:—

Number of Cases	DAYS.							Under one week.	WEEKS.			Over one month.	Over one week.
	1.	2.	3.	4.	5.	6.	7.		1-2.	2-3.	3-4.		
	1	6	7	5	3	1	4	= 27	19	12	9	26	= 66

Seven of the children died in Poor Law Institutions and one in the Borough Hospital.

In five cases the infants' food was stored in places exposed to gross contamination. In ten cases flies were noted to be particularly numerous in the houses. It was observed that in several cases the disease attacked older children or the adults of the family before the younger children became ill. Of the 126 cases notified by medical men, 105 or 83% recovered.

The information gained as the result of the epidemic leads to the conclusion that the disease is an infectious one. The opinion of several German observers that it is a species of heat stroke receives but little support from Bootle experience. Isolated cases occur throughout the year; whenever the temperature reaches a certain high point the infecting agent appears to have increased capability of growth. Organic matter, refuse and filth of all kinds appear to contain the virus.

The method adopted to deal with the epidemic was by frequent visits to all children who were known to have diarrhœa: these were paid by the two Lady Inspectors and several Voluntary Helpers who instructed the mothers concerning the disease. The mothers were urged to pay great attention during the hot weather to cleanliness of home and person. The danger of allowing soiled napkins to lie about the living rooms was explained, as also the necessity for covering milk and other food to prevent contamination by flies or dust. A leaflet was issued drawing attention to the facts that flies breed in manure and collections of decaying vegetable and animal matter; that they convey disease germs from filth to food and from person to person; that all house refuse should be burnt or placed in proper receptacles and kept covered. A notice concerning the proper use of ashpits was reprinted and distributed. House-to-house visitations of the premises in which infants lived were made and the advice given was much appreciated. Suggestions which may be made for next year are that ashpits be emptied every ten days; it is some ten to fourteen days before the egg of a fly can fully develop even in favourable circumstances. By emptying the ashpits every ten days, one of their common breeding grounds would be destroyed. Ashbins of an approved pattern, to be emptied every week, should be substituted for ashpits.

The extra gang of flushers which has been discontinued since 1906 should be engaged again during the summer months; their work should be confined to the districts in which "diarrhœa" is apt to be prevalent, and they should wash back passages and streets in dry weather in addition to flushing the drains.

PHTHISIS.

During 1911, 96 deaths were certified to be due to phthisis: this is a rate of 1·36 per 1,000 living.

The following table gives the number of deaths from phthisis in each Ward for 1911 and the previous ten years:—

		Derby.	Stanley.	Mersey.	Knowsley.	Linaere.	Orrell.	Total.	Rate per 1,000 of the population.
1901	...	10	12	31	18	7	—	78	1·32
1902	...	11	12	35	25	16	—	99	1·66
1903	...	9	12	22	18	15	—	76	1·26
1904	...	15	12	31	31	11	—	100	1·64
1905	...	12	8	27	15	16	—	78	1·26
1906	...	6	9	27	17	21	6	86	1·30
1907	...	14	11	13	11	30	3	82	1·22
1908	...	13	12	34	16	26	3	104	1·54
1909	..	15	9	18	20	15	4	81	1·18
1910	...	10	16	19	14	19	5	83	1·19
1911	...	21	13	29	12	20	1	96	1·36
Average of 10 years									
1901-1910...		11	11	25	18	17	4	86	1·34

The rates per 1,000 of the estimated populations in the various Wards are:—

	Derby.	Stanley.	Mersey.	Knowsley.	Linaere.	Orrell.
Average of years 1901 to 1910	·93	·95	1·9	1·4	1·2	*1·0
1911	1·5	1·0	2·1	·95	1·3	·25

* For years 1906-1910 only.

Table showing death rates per 1,000 of the population from phthisis in the past two decennial periods:—

	1891-1900.	1901-1910.
England and Wales	1·39	.. 1·17 (1901-1909).
Bootle	1·63	... 1·34

On May 1st, the Tuberculosis (Hospital) Regulations came into operation. These require that all cases of pulmonary tuberculosis occurring in patients attending Voluntary Hospitals be notified. A similar provision

relating to Poor Law Patients has been in force since 1909. There has been a system of voluntary notification in Bootle for many years. During 1911, 188 cases of phthisis were notified to the Medical Officer of Health.

The following table compares the origin of the notifications with that in previous years :—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Voluntary Notifications by Private Practitioners or by the Medical Inspector of Scholars	22	22	21	40	22	18	7	24	26	28	28
Cases notified by Poor Law Medical Officers	—	—	—	—	—	—	—	—	124	95	129
Cases notified by Medical Officers of Voluntary Hospitals	—	—	—	—	—	—	—	—	—	—	31
	22	22	21	40	22	18	7	24	150	123	188

In the above table first notifications only are noted.

In addition to the above, 24 cases were investigated in 1911, of which the first intimation was received from the death returns; this number for 1910 was 34 and for 1909, 22. Eight cases reported by the Medical Inspector of Scholars were visited and are included in these statistics. In addition to these cases of Acute Pulmonary Tuberculosis, some 16 chronic and 26 suspected cases were kept under the observation of the Medical Inspector; they are not included here. Those phthisical school children who are being treated by private practitioners are often not seen by the Medical Inspector.

The 212 cases investigated by the Public Health Department were of the following ages :—

	Number of deaths.	Surviving cases.
Under 15 years	17	38
15-25 „	13	42
25-35 „	20	19
35-45 „	22	12
45-55 „	20	3
55-65 „	1	1
Over 65 „	3	1
	96	116

212

The following table gives the occupations of these persons :—

No. of Cases.		No. of fatal Cases.	No. of non-fatal Cases.
10	Below School Age	4	6
42	School Children	10	32
40	Housewives and Widows	22	18
32	Dock Labourers	8	24
15	General Labourers	10	5
8	Clerks	8	—
7	Domestic Servants	3	4
6	Factory Hands	4	2
5	Scalers	2	3
4	Firemen	3	1
3	Engineers	1	2
3	Engine Fitters.....	1	2
2	Publicans.....	1	1
2	Laundresses.....	—	2
2	Tailors	1	1
2	Ships' Stewards	1	1
2	Plumbers	—	2
2	Charwomen	1	1
2	Sailmakers	2	—
2	Boiler Makers	1	1
1	Watchman	1	—
1	Boatman	1	—
1	Night Soilman.....	1	—
1	Grocer	1	—
1	Canvasser.....	1	—
1	Photographer	1	—
1	Mariner	1	—
1	Gas Stoker	1	—
1	Coal Heaver.....	1	—
1	Hairdresser	—	1
1	Pedlar	1	—
1	Compositor	1	—
1	Greengrocer	—	1
1	Hawker	—	1
1	Soldier (Pensioner)	—	1
1	Musician	1	—
5	None.....	1	4
212		96	116

The patients whose addresses are known are visited once a month by a Sanitary Inspector. They frequently change their residence and are often lost sight of.

The whereabouts of 33 cases of phthisis who had been notified in previous years were known at the beginning of 1911 ; during that year enquiries were made concerning 212 other patients. Of the total of 245, 96 died, including 18 of the 33 previously notified ; 38 were being visited at their homes at the end of the year ; 70 were in Workhouse Hospitals ; 8 were in other hospitals or sanatoria ; the remaining 33 could not be traced, having removed either out of the town or to some other address in Bootle. Some of the 33 cases whose present residences are unknown may have succumbed to the disease in other towns.

Many of the patients are frequently entering and leaving the Workhouse Hospitals. One case has been notified 16 times, 4 of these were during 1911.

An analysis of the information contained on the enquiry forms concerning the 212 cases investigated last year, shows that in :—

- 36 some other members of the family had previously died of phthisis,
- 15 had occupied two or more houses since becoming ill,
- 93 received Poor-Law treatment only,
- 31 had been treated as out-patients at Voluntary Hospitals, some of these later on entered the Workhouse Hospitals ;
- 37 had not received hospital treatment.

The following information concerning the isolation of the patients or the lack of it was obtained :—

Number of cases who occupied alone a single room ..	...	44
Number who slept in a separate bed in a room occupied by another person ... ..	...	11
Number who slept with another person ... ..	...	69
„ „ „ „ two other persons ... ..	...	46
„ „ „ „ in the same room as three other persons		30
„ „ „ „ „ „ „ „ four „ „		12

In the last two groups, it was not unusual to be informed that two or sometimes three persons occupied the same bed as the patient.

These figures show that there is urgent need for the provision of isolation accommodation for the patients and power in certain cases to make them use it.

The number of cases which occurred in common lodging houses was 10, in sub-let houses 48.

In August, 1910, the late Medical Officer of Health made a report on the subject of Sanatorium accommodation for patients suffering from phthisis. His suggestions included two alternative sites for a Sanatorium, namely, 1, that the house adjoining the New Cemetery Grounds and owned by the Corporation be adapted for use; and 2, that accommodation be provided at the Linacre Hospital for cases of phthisis, after provision for cases of smallpox had been made at Maghull. Another suggestion he made was that a Dispensary for Out-door Patients be provided in connection with either of the above schemes. A further report on the advisability, or otherwise, of establishing a Tuberculin Dispensary was then asked for and was presented to the Health Committee on October 16th, 1911.

In that report the value of tuberculin treatment in large doses was discussed. It was stated that the value of tuberculin in the treatment of advanced cases of the disease is not proved, but it is generally admitted that it is very useful in the early stages of the disease. It was pointed out that, in Bootle, in 1910 one death out of every nine was due to tuberculosis, and one death out of every twelve to phthisis; also, that phthisis frequently attacks those who are at the working years of life; that 58 of the victims in Bootle during 1910 were between the ages of 25 and 65 years, and 18 others between 15 and 25; that one-eleventh of the total expenditure of the Poor Law Authorities is due to tuberculosis; that, as a rule, the British workman will not seek medical advice sufficiently early to enable a cure to be made, he pays no attention to such symptoms as a cough or a "run-down" feeling, and does not consult a doctor until he can no longer work; that the pauperizing effect of the disease is shown by the fact that 35% of the cases have died in the work-house. The average duration of a case of phthisis is estimated to be five years. There are, therefore, in Bootle over 450 cases of phthisis; some are early cases capable of being cured if properly treated; others are in the middle stages and when properly instructed are not infectious; then there are the disabled or bed-ridden patients expectorating live tubercle-bacilli, which too often settle in the lungs of those who attend to their wants and produce other cases of the disease. A review of the available means for the treatment of phthisis was given, and it was shown that a large number were not being treated; these were mostly the early curable cases who were unaware of the nature of their illness. It was pointed out that then only advanced cases were notified.

It was stated that the methods now adopted for preventing the spread of this disease, in Bootle, are :—

1.—Visits by a Sanitary Inspector to each notified case.

Leaflets containing information on how to avoid infecting other people are given to the patients.

2.—The provision of sputum flasks.

3.—Disinfection after death or removal of the patient.

4.—Attention given to general sanitary matters, particularly by endeavouring to improve the housing conditions of the people.

5.—The education of school children concerning the value of fresh air and hygienic principles.

Also, that in a complete scheme for the administrative control of Pulmonary Tuberculosis the following should be provided in addition to the above :—

6.—A Sanatorium for curable cases.

7.—A Farm-Colony in connection with the above.

8.—An After-care Society in connection with an anti-tuberculosis dispensary.

9.—An open-air school.

10.—A hospital for advanced cases.

11.—A dispensary for the treatment of out-patients and for the performance of all the functions mentioned below.

It was stated that the functions of such a dispensary would be :—

a—**DIAGNOSIS OF SUSPECTED CASES.**—These would be referred to the dispensary by medical practitioners; the sputum would be examined for tubercle bacilli, the tuberculin tests would be applied. A report would be sent to the medical man who would treat the patient himself or ask the officers of the dispensary to undertake the treatment.

b—**EXAMINATION OF CONTACTS.**—This would be the most important work of the dispensary. Phthisis is an infectious disease which is transmitted from person to person, and the great majority of people who die from this disease are not aware of the fact that they have been infected or of their infectiousness until they are in an advanced stage. An endeavour would be made to examine, at the dispensary, all those who live in the house in which a case of phthisis has been discovered. At the Paddington Dispensary, twenty-one per cent. of the patients suffering definitely from phthisis were diagnosed as the result of the examinations of contacts.

In this way, early cases who can be cured would be discovered, otherwise, these self-same people would, in a year or so, become disabled and not till then would they attend a doctor and be informed of the nature of their disease.

c—TREATMENT would be given to those who could not afford to be treated by a private medical practitioner.

d—EDUCATION OF CONSUMPTIVES.—The dispensary would act as an educative centre for the whole Borough; phthisical patients would be instructed in the proper mode of preventing the spread of infection. Sputum flasks would be given to the sufferers. The Dispensary Nurse would visit the homes of the patients, infuse into all the doctrine of open windows and explain how fresh air treatment can be attempted in an artisan's dwelling.

e—The dispensary would act as a "clearing house" for all cases of phthisis in the Borough. Suitable cases for Sanatorium treatment would be picked out and an endeavour made to obtain admission for them. On their return from the Sanatorium the care of these patients would be continued. Advanced cases, with no hope of recovery, would be referred to the Board of Guardians; if they refused to enter the hospitals, strict supervision would be exercised at their homes.

The methods adopted by the municipalities of other towns, including Liverpool, Cardiff, and Portsmouth, for the administrative control of phthisis were reported.

It was suggested that a dispensary be inaugurated; that it be opened in the first place for one afternoon and one evening a week, and that, for the present, it be staffed by members of the Public Health Department.

The Health Committee recommended the Council to proceed with the scheme, but the Council resolved to postpone the matter.

Towards the close of the year a suggestion was made that accommodation for some ten or twelve cases of Pulmonary Tuberculosis be provided at the Linacre Hospital for Infectious Diseases.

Cases of phthisis are now treated in the isolation hospitals of several towns. The Medical Officer of the Local Government Board in a memorandum states:—"With regard to the use under regulated conditions of the wards of an isolation hospital for the treatment of cases of Pulmonary Tuberculosis, experience has demonstrated that this can be done with entire safety to the consumptive patient and with great success in his treatment."

The answers to the questions asked by the Local Government Board concerning Sanatorium and Hospital Accommodation for cases of phthisis are as follow:—

ACCOMMODATION FOR EARLY CASES OF PHTHISIS.

A sanatorium containing 24 beds has been erected by the three Boards of Guardians, Toxteth Park, Liverpool and West Derby. Bootle is in the West Derby Union : the population of the three Poor Law areas was 878,223, that of Bootle, 69,881 at the last census. Occasionally, Bootle people are admitted to the Liverpool Consumption Hospital and are sent from there to the Kingswood Sanatorium.

ACCOMMODATION FOR INTERMEDIATE AND ADVANCED CASES.

Accommodation for these cases is provided only by the West Derby Board of Guardians at their Mill Road and Walton Hospitals.

The Sanitary Authority does not provide any accommodation for cases of phthisis.

The Sanitary Authority does not reserve beds in any Sanatorium, nor are portable open-air shelters or tents provided. A dispensary has not been established.

INSURANCE ACT AND TUBERCULOSIS.

In accordance with the provisions of the National Insurance Act, 1911, and the Finance Act, 1911, a sum of one and half million pounds is to be expended for the erection of Sanatoria in the United Kingdom.

By the former Act the Local Insurance Committees are required to make arrangements with persons or Local Authorities (other than Poor Law Authorities) for the treatment of cases of Tuberculosis occurring in insured persons ; if they wish, they can make similar arrangements for the dependants of insured persons. At least 1s. 3d. and possibly 1s. 4d. for each insured person living in the town will be allocated annually for this special purpose. It is probable that about £1,000 a year will be at the disposal of the Bootle Insurance Committee for this purpose. Adequate provision for these cases would include not only a dispensary but also hospital accommodation for advanced cases, and Sanatorium accommodation for early cases. It has been computed that one bed for every 2,500 of the population will be required. On this basis, 28 beds would be required for Bootle patients. This could be done by providing pavilions at Linacre or Maghull, or by participating in a Joint Scheme with neighbouring authorities.

BURNS AND SCALDS.

During the year there was an increase in the number of deaths due to Burns and Scalds.

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Total.										
Deaths from burns and scalds of children under the age of 8 years ...	5	...	6	...	5	...	7	...	3	...	14	...	6	...	9	...	1	...	7	...	63

The age distribution of these 63 cases is :—

Under 1 year.	1-2.		2-3.		3-4.		4-5		5-6.		6-7.		7-8.	
5	...	6	...	10	...	16	...	6	...	12	...	3	...	5

Three hundred fireguards have been distributed by the Bootle Health Society during the past two years.

ALCOHOLISM AND CIRRHOSIS OF THE LIVER.

During the year 1911, three deaths were certified to be due to alcoholism and seven to cirrhosis of the liver.

CANCER.

The number of deaths from cancer was 73, or 1·04 per 1,000 of the population ; the rate last year was ·76. In 1909 it was ·92 ; in 1908 ·78.

PNEUMONIA caused 151 deaths, or 2·15 per 1,000.

BRONCHITIS caused 110 deaths, or 1·56 per 1,000.

CEREBRO-SPINAL MENINGITIS was certified to be the cause of two deaths which give a rate of ·028 per 1,000.

Of the 209 deaths recorded as due to "other defined diseases," 49 were caused by cerebral hæmorrhage, 23 by arterio-sclerosis and 8 by diabetes.

THE MIDWIVES' ACT, 1902.

The number of midwives on the local roll is 20 ; this is 9 less than during 1910. Thirteen others, who reside outside the district, gave notice of their intention to practice within the Borough. Three local midwives have not passed any qualifying examination, but each has been recognised by the Central Midwives' Board in consequence of having been in practice as a midwife for at least a year on July 31st, 1902.

In compliance with Section 8 of the Act, the Central Midwives' Board have been supplied with the following information :—

Change of name	...	...	...	...	...	1
Change of address	...	...	...	...	...	3
Notice of intention to cease practice	...	...	...	...	...	Nil
Death of Midwife	...	...	...	...	...	Nil

The following notifications have been received :—

Records of sending for medical help	...	...	92	(84)
Still births	...	...	46	(56)
Death of child before attendance of a medical practitioner	...	...	1	(1)
Cases of puerperal fever notified by midwives...	—	—	—	—

(The corresponding figures for 1910 are shown in brackets).

Number of births attended by the midwives who reside in Bootle	...	...	1,396	(1,433)
Number of births attended by midwives who reside outside the district...	...	...	287	(221)

Midwives attended 80% of the births registered in the Borough compared with 82% in 1910.

Largest number of births attended by one midwife...	...	...	206	(226)
Percentage of still births to total births attended by midwives	...	...	2·7	(3·9)

The following particulars relate to the period of pregnancy during which the still births took place :—

At 5 months	...	...	...	1
„ 6 „	...	...	...	6
„ 7 „	...	...	...	8
„ 8 „	...	...	...	7
„ 9 „	...	...	...	24
Total	...	...	...	46

The 92 cases in which medical help was obtained are 5·4% of the total number of births attended by midwives.

The following is a list of the complications for which medical assistance was required :—

Labour :—

Unusual presentations	...	...	...	...	13
Post-partum hæmorrhage	...	...	...	...	5
Placenta prævia	...	...	...	...	1
Retained placenta	...	...	...	...	4
Adherent placenta	...	...	...	...	3
Obstructed labour, uterine inertia, or requiring instrumental assistance	...	...	...	...	32
Ruptured perinæum	...	...	...	...	14
Other complications	...	...	...	..	2

Puerperium :—

Rise of temperature above 100·4° F.	2
-------------------------------------	-----	-----	-----	---

Newly born child :—

Dangerous feebleness and prematurity	...	...	...	6
Inflammation of eyes or eyelids	...	...	...	7
Icterus neonatorum	...	...	...	1
Other complications	...	...	...	2

Total	..	92
-------	----	----

PUERPERAL FEVER.

During the year, five cases of puerperal fever were notified of whom one died; this gives a notification rate of 2·3, and a death-rate of ·47 per 1,000 births.

OPHTHALMIA OF THE NEW-BORN.

Seven cases of this disease were notified during the year; in all cases the midwives had called in a doctor as soon as the inflammation was noticed. Five cases were treated by private practitioners; one child with the mother was admitted to St. Paul's Eye and Ear Hospital, Liverpool, another to the Workhouse Hospital.

HOUSING.

During the year considerable attention was paid to Housing, and a Housing Sub-Committee has been formed. There are four common lodging houses in the town; they are registered to accommodate 297 lodgers. During the year the houses were never quite full.

There are many sub-let houses in the town. Most of these are in Mersey Ward. An enquiry made in December revealed the fact that of 1,121 houses in the portion of this ward between the Lancashire and Yorkshire Railway and the Dock Estate, 52 or 4·7% were empty; 654 or 58·4% were occupied by a single family, in 128 of these, lodgers were taken in; 344 or 30·7% were occupied by two families; 71 or 6·2% by three or more families. The large houses and shops in Derby Road, a main thoroughfare, are not included in these statistics.

Mersey Ward contains the most congested portion of the Borough; in this district most of the property is old, with narrow back passages and yard spaces less than one half that required for newly-erected houses. It is not surprising that there the general death-rate and that from phthisis are always high. It is unfortunate that many of the houses in the Bootle Hall Estate District of Knowsley Ward are now being sub-let.

Though it is well-known that the number of sub-let houses in the Borough is about 600, yet the number on the sub-let register is only a small percentage of this. This is because of the migratory habits of the tenants; it often happens that other tenants are in occupation before the formalities of registration are completed; then the whole process has to be started again. The number of visits paid to sub-let houses during the year was 2,530.

When dealing with the housing problem in Bootle, the casual nature of the employment of a large number of the workers must be considered. It has been computed that the average wage of a dock labourer amounts to 18s. a week.

Unfortunately there are very few self-contained houses at a rental which can be paid by a person possessing this limited income, and the amount of sub-letting in the portions of the town occupied by these workers is not to be wondered at. As was fully stated in the annual report for 1910, in the houses occupied by more than one family the absence of one or more of the following renders them unsuitable for those families who occupy rooms elsewhere than on the ground floor:—

- (a) Convenient and readily accessible water supply,
- (b) Scullery and sink for each family,
- (c) A proper place to store food,
- (d) A fireplace suitable for cooking purposes,
- (e) Convenient access to a water-closet.

Bye-laws relating to houses let in lodgings or occupied by members of more than one family were made in 1904. During 1911 an attempt was made to obtain further powers to deal with the matters mentioned above. The Local Government Board have sanctioned an additional clause to provide for the conditions (a) and (b); the wording is as follows:—

“ Subject to the provisions of these bye-laws the landlord of a lodging-house shall at all times provide and maintain on every floor in such lodging-house an adequate supply of water for the purposes of cleanliness, and a sink for the removal of waste water for the use of lodgers on such floor and conveniently accessible to every lodger in every room of such floor.”

(c) The Local Authority resolved that lack of provision of a separate place to store food for each family in a sub-let house rendered that house not reasonably fit for human habitation. In sub-let houses dealt with under Section 15 of the Housing, Town Planning etc., Act, a cupboard has been provided for this purpose.

(d) & (e) After communication with the Local Government Board it was decided not to proceed further, at present, concerning these two items.

The bye-law dealing with separation of the sexes in sub-let houses was revised and now reads as follows:—

“ A lodger shall not knowingly cause or suffer persons of different sexes above the age of twelve years, and not being persons living together as husband and wife, to occupy as a sleeping apartment any room let to such lodger.”

During the year the occupier of one sub-let house was summoned for permitting overcrowding. Forty-six notices concerning overcrowding were served during the year.

There are no back-to-back houses in the Borough, in one small district the arrangement of the streets is bad; otherwise the amount of open space about the houses is fairly satisfactory. Pride of home and cleanliness of the same are not marked features in the poorer districts of the town.

All new buildings are erected under the supervision of the Borough Engineer.

HOUSING (INSPECTION OF DISTRICT) REGULATIONS.

During the year, 133 premises were inspected : of these, 62 were occupied, 4 were used as stores, and 67 were unoccupied. There are no properly so-called cellar dwellings in the town ; in Beresford Street the living rooms of the lower tenements are below the level of the street but the sleeping rooms are above that level. The first street dealt with, Beresford Street, is situated near the docks ; each building is three stories high and consists of two four-roomed tenements, an upper and a lower. The street originally contained 119 tenements. In the early part of the year the 44 occupied tenements, 9 lower and 35 upper were inspected. The 9 lower tenements were reported to be in a state so dangerous and injurious to health as to be unfit for human habitation.

Closing orders were made but not sealed pending a decision as to the procedure, because these tenements were under upper tenements which latter were capable of being rendered fit for human habitation ; hence, demolition was undesirable. The closing orders were sealed on November 4th. Of the remaining 35 houses, the contract of letting the house to the tenant was entered into before December 1909 in 24 cases ; notices under the Public Health Act were served upon the owners in respect of these houses. Four houses in the street are owned by one person ; the remainder by another. The notices sent to the former were complied with. Those sent to the latter were not attended to. The Committee, after full consideration of all the circumstances, gave the latter owner further time as he was endeavouring to sell the property.

Concerning 11 of the houses, notices under Section 15 of the Housing, Town Planning, etc., Act, were served ; these have not yet been complied with. If the work is not put in hand forthwith, the Corporation have decided to do it at the owner's cost. In July, the 71 unoccupied houses were inspected. Closing orders were made concerning 44. Many of these tenements have become ruinous ; in some cases the upper yards have fallen down, all the iron-work and most of the wood-work have been taken away, and in many cases, portions of brick-work also. The question of demolition of these houses will shortly be considered.

The south side of Lincoln Street was inspected during December. Eighteen houses were examined ; these are five-roomed houses, ten of which were sub-let. In 13 cases the contract for letting had been entered into after

December, 1909. The defects found in these 13 houses were not of a serious nature, but in combination they rendered the houses not reasonably fit for human habitation, and notices were served under section 15 of the Housing, Town Planning etc., Act. They were all complied with. Two of the remaining five houses required no repairs; the other three were dealt with under the Public Health Act.

STATEMENT OF WORK DONE DURING 1911 UNDER HOUSING
(INSPECTION OF DISTRICT) REGULATION, 1910.

Number of Houses Inspected.	Number considered to be in a state so dangerous or injurious to health as to be unfit for human habitation.	Number of representations made to the local authority with a view to the making of closing orders.	Number of closing orders made.	Number of houses in which defects were remedied without the making of closing orders	Number of houses which, after the making of closing orders, were put into a fit state for human habitation.
133	<div> <div>occupiedunoccupied</div> <div>944</div> <div>53</div> </div>	53	53	—	—
Number of houses declared not reasonably fit for human habitation.	Number of houses repaired after notices under Sec. 15 of H.T.P., etc., Act.	Number of notices under Sec. 15 of H.T.P. Act not yet complied with.	Number of houses ordered to be repaired under the provisions of the Public Health Act.	Number repaired after notices served under Public Health Act.	Number of notices under Public Health Act not yet complied with.
24	13	11	27	7	20

There is now one Assistant Inspector more than last year, and more inspections will be possible in 1912 than in 1911.

The town has been divided into two districts, and it is proposed to continue the housing inspections systematically in each area. During the year, in consequence of the fact that so many houses in Beresford Street have

been vacated, the question of providing workmen's dwellings was considered. In 1909, application was made to the Local Government Board for permission to borrow money for the purpose of erecting a block of tenements in Falkner Crescent—the only vacant plot of land near Beresford Street. After a Local Enquiry the Board stated that, in their opinion, the site was not suitable. In July, 1911, the Medical Officer of Health was asked to report upon the following :—

- “(a) The number and situation of the empty houses in the Derby Road District.
- (b) Their rentals, size and general suitability for occupation by persons of the labouring class.
- (c) Their sanitary condition and the repairs or alterations required, not only to make such houses reasonably fit for human habitation but, to render them convenient and suitable dwellings if used as sub-let houses.”

The following facts relating to the subject matter of these three questions may be given.

On January 20th, 1911, 85 families were living in the 46 occupied tenements in Beresford Street. At the end of the year 31 tenements were occupied by 55 families.

In January, 70 houses in the Derby Road District were empty, 63 of these were “to be let” at a rental of 7/6 weekly, or less. On June 30th, 54 houses were empty, 45 being at a rental of 7/6 weekly, or less. On November 27th, the numbers were 50 and 42, and I may add that, on February 22nd, 1912, they were 43 and 36.

The fact that a large number of workmen will be engaged at an engineering works, which is about to be established in the Derby Road District will tax the housing accommodation to its utmost capacity.

The rentals of the houses empty on June 30th, 1911, may be given :—

Weekly rental :	4/8,	5/-,	5/6,	6/-,	6/6,	7/-,	7/6,	9/-,	9/6,	10/-,	11/-
Number of											
empty houses :	1	14	15	2	7	3	3	6	1	1	1

The sizes of the houses are, speaking generally, four-roomed, if weekly rental is 5/- ; a five-roomed house lets for about 5/6, and a six-roomed for 5/6 to 7/6.

In the district concerned the great majority of the premises with more than two bedrooms are sub-let.

The sanitary condition of the dwellings was such that they could be readily made suitable for occupation by one family in each, but they are not suitable for sub-letting.

The crux of the housing question is that the people living in the Derby Road District do not pay the rent of a whole house even if that be so low as 5/- weekly. In the investigation conducted in June there were 15 empty houses let at a rental of 5/- weekly, or less. The previous tenants of no less than 13 of these had been evicted by the landlord, the common reason being "arrear of rent." The four-roomed houses in Beresford Street were mostly sub-let, the sub-tenant paying a weekly rental of 1/6—2/6.

In the interests of public health it is highly desirable that sub-letting should be limited as much as possible, hence it is necessary that houses to be let at small rentals within the reach of poorer families should be provided. In the neighbouring City of Liverpool where similar conditions of casual employment prevail, the weekly rents of Corporation dwellings range from 1/6 to 4/6. The majority are two-roomed tenements let at rentals of 2/6—3/6 weekly.

FOOD INSPECTION.

MEAT.—The butchers' and food shops throughout the town were regularly visited during the year, especially during the hot weather. The articles there exposed for sale were wholesome. It was not necessary to take any action under Section 117 of the Public Health Act. During the year 1,669 lbs. of unsound food were destroyed in small quantities at a time; most of it was destroyed at the request of the owners. No tuberculous meat was discovered in the Borough.

Only two slaughter houses are in use. The license for one of these was given only on condition that no animals, except those belonging to the licensee, should be slaughtered there, unless information as to the time of slaughtering had been previously supplied to the Medical Officer of Health. Nearly all the meat sold in Bootle comes from the Liverpool or Birkenhead Public Slaughter Houses, or is imported in a frozen condition from abroad.

A food factory certified for the preparation of food for export to the Argentine Republic, the United States of America and the Philippine Islands is kept under observation.

MILK.—About 550 dairy cows are kept in the 33 shippons in the Borough ; they are periodically examined by a Veterinary Surgeon, Mr. James Sumner, M.R.C.V.S., who has made the following report on the work done by him during the year 1911 :—

“In my inspections of the shippons and examinations of the cows’ udders every three months, I am pleased to state that I found everything satisfactory. The average number of animals is kept and they are of a very good class. The shippons, old and new, were clean and well attended to. There was evidence of greater cleanliness on the part of the milkers. At my suggestion several cows were sent out (without being tested) owing to an unsatisfactory condition of their udders.

I find the dairymen are most anxious to have their cows examined and they are ready to carry out any suggestions made.”

Nothing is definitely known as to what became of the animals which were sent out of the town on the recommendation of the Veterinary Inspector. It is surmised that they were sold at the Stanley Cattle Market, Liverpool.

The present unsatisfactory condition of the law relating to tuberculous cows is shown by the fact that three cows which had been ordered to be removed from the neighbouring district of Waterloo-with-Seaforth, after the tuberculin test had been there applied, were afterwards discovered in Bootle. Had they not been recognized, the only result of the costly trouble, taken by the Waterloo Sanitary Authority, would have been that the cows were housed just outside their district and still utilized as sources of milk for sale to the public.

During the year, twelve samples of “railway” milk were examined bacteriologically ; none of these were tuberculous. The samples contained *Bacillus Coli Communis*, indicating filth contamination or inflammation of the udder, in numbers varying from 30 to 410 per cubic centimetre. The *Bacillus Enteritidis Sporogenes* (Klein) was present in 10 cubic centimetres of one of the samples but not in the others. These bacteriological findings indicate the necessity for greater attention to cleanliness on the part of those who send milk into the Borough.

The question of making new regulations under The Dairies, Cowsheds and Milkshops Order was considered during the year, and was deferred pending the promised legislation on this subject.

No serious attack of food poisoning came to the notice of the Medical Officer of Health during the year. Four samples of meat pies, five of sausages, and one of brawn were examined bacteriologically. Both *Bacillus Coli Communis* and *Bacillus Enteritidis Sporogenes* were found in two of the meat pies ; *Bacillus Coli* only in another, and neither organism in the fourth. Each of the samples of sausages and the brawn contained *Bacillus Coli Communis* and *Bacillus Enteritidis*.

SALE OF FOOD AND DRUGS ACTS.

The table shows the number of samples taken and the number reported to be adulterated.

During the year a milk dealer was fined 40s. and costs for refusing to sell a sample of milk to the Inspector.

SALE OF FOOD AND DRUGS ACTS, YEAR 1911.

	Total Number of Samples Analysed.	Number Reported by Analyst to be Adul- terated.	Prosecu- tions.	Number of Convic- tions.	Remarks.
Milk	101	35	22	22	In the remaining 13 cases the adulteration was so trifling as not to warrant prosecution. The vendors were warned. Amount of fines and costs = £34 15s. 6d. Analyst's fee allowed in each conviction.
Butter	53	1	—	—	This was an informal sample. An official sample subsequently purchased from the same vendor was found to be genuine.
Pepper	10	—	—	—	—
Cheese	9	—	—	—	—
Lard	5	—	—	—	—
Mineral Waters ...	5	—	—	—	—
Flour	3	—	—	—	—
Rice	3	—	—	—	—
Syrup	3	—	—	—	—
Beer	2	—	—	—	—
Whiskey	1	—	—	—	—
Rum	1	—	—	—	—
Cocoa	1	—	—	—	—
Jam	1	—	—	—	—
Vinegar	1	—	—	—	—
Potted Shrimps ...	1	1	—	—	In this case the adulteration was so trifling as not to warrant prosecution.
Totals	200	37	22	22	—

The foregoing table shows that the largest number of samples purchased in Bootle was that of milk. This is in accordance with the recommendation of the Board of Agriculture, viz. that the number of samples taken should total not less than 3 per 1,000 of the population, and half of these should be milk.

WATER ANALYSIS.

TABLE SHEWING MONTHLY ANALYSES OF WATER SUPPLIED BY THE LIVERPOOL WATER COMMITTEE TO BOOTLE DURING THE YEAR 1911.

Description.	Month.	Total Solid Matter in Solution	Ammonia.	Ammonia from Organic Matter by distillation with Alkaline Permanganate.	Nitrogen as Nitrates	Combined Chlorine	Oxygen required to oxidise		Total Hardness.
							In 15 mins	In 3 hrs.	
Vyrnwy	Jan.	5.6	.002	.003	none	.8	.080	.170	2.7°
Rivington	"	8.2	.002	.005	none	1.2	.026	.050	3.8°
Vyrnwy	Feb.	4.4	.002	.004	none	.8	.086	.193	1.7°
Rivington	"	8.1	.003	.006	trace	1.25	.026	.059	3.8°
Green Lane Well	"	34.4	.001	.000	.53	3.4	.001	.003	21.4°
Vyrnwy	Mar.	3.8	.001	.004	.000	.8	.093	.184	1.4°
Rivington	"	8.6	.002	.005	trace	1.25	.028	.059	3.9°
Green Lane Well	"	34.0	.001	.001	.55	3.4	.001	.002	21.9°
Vyrnwy	April	3.9	.002	.007	none	.8	.085	.175	1.6°
Rivington	"	7.8	.002	.006	trace	1.25	.019	.042	3.6°
Green Lane Well	"	33.8	.001	.000	.56	3.4	.002	.004	21.0°
Vyrnwy	May	3.5	.002	.004	.00	.8	.083	.158	1.3°
Rivington	"	9.0	.002	.005	trace	1.3	.017	.036	3.9°
Green Lane Well	"	34.4	.001	.001	.54	3.4	.000	.000	21.4°
Vyrnwy	June	3.6	.001	.004	.00	.8	.083	.150	1.4°
Rivington	"	8.8	.002	.003	trace	1.3	.014	.025	3.9°
Green Lane Well	"	33.4	.001	.001	.53	3.4	.000	.000	21.0°
Vyrnwy	July	3.4	.002	.003	.00	.8	.058	.120	1.6°
Rivington	"	8.0	.002	.003	trace	1.3	.005	.008	3.8°
Green Lane Well	"	33.0	.001	.001	.55	3.3	.000	.000	20.6°
Vyrnwy	Aug.	4.2	.002	.003	none	.8	.062	.116	1.4°
Rivington	"	8.6	.002	.004	trace	1.3	.005	.008	3.9°
Green Lane Well	"	34.4	.002	.001	.52	3.4	.000	.000	20.6°
Vyrnwy	Sept.	3.6	.002	.003	.00	.8	.054	.108	1.6°
Rivington	"	8.0	.001	.002	trace	1.3	.006	.011	3.8°
Green Lane Well	"	34.4	.002	.000	.56	3.35	.000	.000	20.1°
Vyrnwy	Oct.	4.0	.002	.004	none	.85	.057	.106	1.6°
Rivington	"	8.9	.001	.002	trace	1.3	.004	.009	3.8°
Green Lane Well	"	36.0	.000	.000	.57	3.4	.000	.001	20.1°
Vyrnwy	Nov.	3.6	.001	.004	.00	.8	.062	.121	1.4°
Rivington	"	8.0	.002	.003	trace	1.3	.004	.009	3.8°
Green Lane Well	"	33.2	.000	.000	.51	3.4	.000	.000	21.2°
Vyrnwy	Dec.	4.2	.002	.007	.00	.8	.075	.150	1.6°
Rivington	"	8.4	.002	.004	trace	1.35	.010	.020	4.0°
Green Lane Well	"	34.6	.000	.001	.56	3.35	.000	.000	21.4°

The water supply is "constant" and the above analyses show it to be of excellent quality; a little "Green Lane Well" water mixed with that from the other sources is supplied to the upper parts of the Borough; most of the town is supplied with Rivington or Vyrnwy water or a mixture of these.

EXTERMINATION OF RATS.

During recent years, rats had become very numerous in this district, and many complaints were made of the damage done by them.

The Council, in February, appointed a rat-exterminator who regularly visits the sewers, destructor and other Corporation property.

Owners of private property were asked to co-operate with the Corporation in efforts to exterminate rats from the town.

The rats are mostly of the brown variety (English field rats), a few black rats have been found in warehouses and goods stations—these rats have come from the docks.

It is now rare to receive complaints of the presence of rats.

OFFENSIVE TRADES.

The following offensive trades exist in the town :—

Tanneries—2.

Fat Melter—1.

No nuisance was caused during the year.

LOCAL OR ADOPTIVE ACTS RELATING TO PUBLIC HEALTH IN FORCE IN THE BOROUGH ARE :—

Bootle Corporation Act, 1890.

Bootle Order, 1897, relating to Sanitary Improvements.

Bootle Corporation Act, 1899.

Infectious Disease (Notification) Act, 1889.

Infectious Disease (Prevention) Act, 1890, Sections 4, 5, 6, 14, 15, 16, 17, 18, 20, and 21.

Public Health Acts (Amendment) Act, 1890, Part III.

Notification of Births Act, 1907.

Section 95 of the Public Health Acts (Amendment) Act, 1907.

INFECTIOUS DISEASES HOSPITAL.

The question of the extension of hospital accommodation was further considered during the year.

The Linacre Hospital for Infectious Diseases was built in 1886, it then consisted of an administrative block; two permanent brick pavilions, and a temporary building for cases of smallpox. In 1893, during an epidemic of typhoid fever, a temporary structure for twenty patients was erected, and the following year an additional brick building, which is now used for cases of scarlet fever. During 1900-2, a porter's lodge, discharge block and additions to the administrative block were built, and in 1903 two additional temporary wards were added to the smallpox pavilion. There are now 120 beds in the hospital, of which 34 are in the smallpox pavilion; the remaining 86 beds are in five large and two small wards, they provide accommodation for cases of scarlet fever, diphtheria, typhoid fever and typhus fever. The accommodation for "mixed" or "complicated" cases, and for cases of "other diseases" is not adequate. In 1909, a site for a smallpox hospital at Maghull, some six miles away, was bought, and during 1910 the drains and foundations were laid so that temporary buildings could be erected thereon in the course of eight or ten days.

It was suggested that provision be made for the reception of cases of smallpox at Maghull and for cases of phthisis, measles and mixed and complicated cases of other infectious diseases, at Linacre. The matter is still being considered.

Cases Treated in the Infectious Diseases Hospital, Linacre, during the year 1911.

Patients in hospital on January 1st, 1911.

	Scarlet Fever	Diphtheria	Enteric Fever	Small-pox	Totals
Bootle	20	3	—	—	23
Litherland	3	—	—	—	3
Formby	—	—	—	—	—
Totals...	23	3	—	—	26

Of these, 24 were cured; two cases of diphtheria died.

Patients in hospital on December 31st, 1911.

	Searlet Fever	Diphtheria	Enteric Fever	Small-pox	Totals
Bootle	32	3	1	—	36
Litherland ...	3	1	—	1	5
Formby	—	—	—	—	—
Totals...	35	4	1	1	41

During the year 1911, the number of cases admitted was 293.

"	"	"	"	"	treated	"	319.
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Of the cases *admitted*, the number which ended fatally was 19.

„ „ *treated,* „ „ „ „ 21.

The case-mortality of those under treatment was 6.58%.

Cases admitted during 1911.

	Admitted	Died	Case-mortality
Scarlet Fever	182	6	3·3 %
Diphtheria	65	5	7·7 „
Enteric Fever	6	1	16·6 „
Small-pox	5	1	20·0 „
Typhus Fever	—	—	—
Other diseases	35	6	17·7 „
	293	19	6·49 „

Boottle cases numbered 251 ; Litherland 32, and Formby 10.

SCARLET FEVER.

Age	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
Under 1 year	—	—	—	—	—	—	—	—
1-2 years	1	4	—	1	—	1	7	1
2-3 „	6	4	—	2	—	—	12	2
3-4 „	9	5	1	—	—	—	15	1
4-5 „	9	7	—	1	—	—	17	1
5-10 „	41	46	3	5	2	1	98	1
10-15 „	11	9	1	1	—	—	22	—
15-20 „	4	2	—	—	1	—	7	—
20-25 „	1	2	—	—	—	—	3	—
25-35 „	—	—	—	—	—	—	—	—
35-45 „	—	1	—	—	—	—	1	—
	82	80	5	10	3	2	182	6
	162		15		5			

Deaths: Bootle 5; Litherland 1.

DIPHTHERIA.

Age	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
Under 1 year	—	—	—	—	—	—	—	—
1—2 years	1	3	—	—	—	—	4	—
2—3 „	4	—	—	—	—	—	4	1
3—4 „	2	4	—	1	—	—	7	2
4—5 „	1	6	—	—	1	—	8	1
5—10 „	10	15	1	3	1	—	30	1
10—15 „	3	1	—	1	—	—	5	—
15—20 „	—	1	—	—	2	—	3	—
20—25 „	—	1	—	1	—	—	2	—
25—35 „	—	2	—	—	—	—	2	—
Totals ...	21	33	1	6	4	—	65	5
	54		7		4			

Deaths:—Bootle 4. Litherland 1.

ENTERIC FEVER.

Age	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
15—20	1	1	1	—	—	—	3	1
20—25	—	—	—	—	—	—	—	—
25—35	2	—	—	—	—	—	2	—
35—45	1	—	—	—	—	—	1	—
Totals ...	4	1	1	—	—	—	6	1
	5		1		—			

Deaths :—Bootle 1.

SMALL-POX.

Age	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
20—25	—	—	—	—	—	—	—	—
25—30	—	—	—	1	—	—	1	—
30—35	1	—	2	1	—	—	4	1
35—40	—	—	—	—	—	—	—	—
Totals ...	1	—	2	2	—	—	5	1

Deaths :—Bootle 1.

The man who died had the disease in a semi-confluent form, and it was complicated by pneumonia; he had been vaccinated in infancy only and had one mark of an area of $\frac{3}{4}$ square inch. The four other cases had been vaccinated in infancy, and not again until after they had contracted smallpox. One case was semi-confluent and had one mark of an area of $\frac{3}{4}$ square inch; the other three cases were mild: one had 2 vaccination marks, the combined area was 1 square inch. The other two had each 3 vaccination marks, the combined areas being $1\frac{1}{8}$ and $1\frac{1}{2}$ square inches respectively.

DISTRIBUTION OF "OTHER DISEASES."

Age	Bootle		Litherland		Formby		Totals	Deaths
	Males	Females	Males	Females	Males	Females		
Under 1 year	1	1	—	—	—	—	2	1
1—2 years	3	—	—	—	—	—	3	1
2—3 "	3	—	1	—	—	—	4	—
3—4 "	1	—	—	1	—	1	3	—
4—5 "	—	2	—	—	—	—	2	—
5—10 "	3	4	—	1	—	—	8	3
10—15 "	1	4	—	1	—	—	6	—
15—20 "	1	1	1	—	—	—	3	—
20—25 "	1	—	—	—	—	—	1	—
25—35 "	1	—	—	—	—	—	1	—
35—45 "	—	—	—	—	—	—	—	—
45—55 "	—	—	—	—	—	—	—	—
55—65 "	—	2	—	—	—	—	2	1
Totals ...	15	14	2	3	—	1	35	6
	29		5		1			

Deaths :—Bootle 5. Litherland 1.

Cases notified under the following headings were re-classified to the number indicated :—

Scarlet Fever 18. Diphtheria 9.
Enteric Fever 8. Typhus Fever 1.

TRACHEOTOMY :—

Tracheotomy was performed on 9 patients admitted to the Diphtheria Ward. Of these cases 4 were ultimately fatal.

NON-ZYMOTIC MORTALITY :—

Six deaths occurred as a result of other diseases, viz., Peritonitis 2, Broncho-Pneumonia 4.

During the year the Resident Medical Officer has examined a few specimens of sputum, suspected to be tuberculous, for private practitioners, and has performed the bacteriological investigations required for the cases of diphtheria and typhoid fever.

The following information required by the Local Government Board, has been supplied by the Borough Engineer:—

DRAINAGE AND SEWERAGE.

“ The sewerage system is entirely by gravitation discharging direct into the river. The Borough is divided into four drainage districts with four separate outfalls into the river. One of these outfalls is used solely for Bootle, and one in addition conveys the sewerage from Walton Gaol, situated within the City of Liverpool, one is used jointly with Liverpool, and the fourth also drains a portion of Seaforth and the greater portion of the drainage from Litherland, both Urban District Councils.

Speaking generally, the sewers within the Borough are, so far as is known, sufficient for the needs of the Borough.

The sewers have good falls, and with the exception of some passage sewers, are self-cleansing ; to these sewers Automatic Flushing Tanks, supplied with salt water, are fixed at all heads, for assisting the cleansing of same.

Since October, 1903, all new house drains have been subjected to a water test before finally being approved.

SCAVENGING.

The following is a list of Ashbins and Ashpits in the Borough :—

Ashbins	...	...	...	4,307
Ashpits, single	...	...	...	1,580
Ashpits, double	...	...	...	4,420
Pail Closets	...	...	...	Nil
Middens, single	...	...	...	21
Middens, double	...	...	...	2

The Ashbins are emptied once every week, and the Ashpits and Middens at least once every month.

The method adopted is to empty the Ashpits or Ashbins into light baskets, which are wheeled along the passage and emptied directly into a covered cart."

CLOSET ACCOMMODATION.

Practically every house in the town is supplied with one or more water-closets.

FACTORY AND WORKSHOP ACT, 1901.

The Medical Officer of Health is required to make and to transmit to the Secretary of State an annual summary of the work done under this Act. The following is a copy of the official table.

Additional details will be found on page 75.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

1.—INSPECTION.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES (including Factory Laundries) ...	219	6	—
WORKSHOPS (including Workshop Laundries)	688	74	—
WORKPLACES (other than Outworkers' Premises included in Part 3 of this Report)	334	30	—
Totals ...	1,241	110	—

2.—DEFECTS FOUND.

Particulars	Number of Defects.			Number of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts :—				
Want of cleanliness	49	49	3	—
Want of ventilation	2	2	2	—
Overcrowding	—	—	—	—
Want of drainage of floors ...	12	12	—	—
Other nuisances	37	37	—	—
Sanitary { insufficient ...	—	—	—	—
Accommodation { unsuitable or } ...	4	2	2	—
{ defective } ...	—	—	—	—
{ not separate } ...	—	—	—	—
{ for sexes } ...	—	—	—	—
Offences under the Factory and Workshop Act :—				
Illegal occupation of under-ground bakehouses (S.101) }	—	—	—	—
Breach of special sanitary requirements for bakehouses } (SS. 97 to 100) }	—	—	—	—
Other Offences				
(Excluding offences relating to outwork which are included in Part 3 of this Report)	6	6	6	—
Totals...	110	108	13	—

3.—HOME WORK.

NATURE OF WORK—

Wearing Apparel :

- (1) Making, &c., Dungaree overalls, men's and women's under-clothing. Dressmaking, Tailoring and Boot Repairing.
- (2) Cleaning and washing.

OUTWORKERS' LISTS, SECTION 107—

Lists received from Employers—

			OUTWORKERS.			
			Lists.	Contractors.		Workmen.
Twice in the year	...	..	26	...	4	40
Once in the year	...	...	2	...	—	6

Number of Addresses of Outworkers received from other Councils...28.

Number of Addresses of Outworkers forwarded to other Councils...20.

Notices served on Occupiers as to keeping or sending lists ... —

Prosecutions—

Failing to keep or permit inspection of lists	...	...	...	—
Failing to send lists	...	...	...	—

Number of Inspections of Outworkers' Premises	152
---	-----	-----	-----

Outwork in Unwholesome Premises, Section 108

Instances	...	...	...	...	...	...	...
Notices served	...	...	...	...	...	...	...
Prosecutions	...	...	...	...	...	...	...

Outwork in Infected Premises, Sections 109 and 110—

Instances	..	...	...	...	...	...	...	—
Orders made (S. 110)	...	...	...	...	...	...	...	—
Prosecutions (SS. 109 and 110)			...	..	...	...	...	—

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year.	Number.
Bakehouses	40
Confectionery Bakehouses	22
Workshops and Workplaces	159
Outworkers' Premises	28
Total number of Workshops on Register ..	249

5.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	12
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5).	12
Other	10 (2 pending)
Underground Bakehouses (S. 101)—	32
Certificates granted during the year (renewed)	18
In use at the end of the year	18

SHOP HOURS ACT.

Under this Act a young person means anyone under the age of 18 years.

It is illegal to employ such a person for a longer period than 74 hours per week, including meal times.

Notices containing the chief provisions of the Act, must be displayed in a conspicuous place in shops.

The following is a summary of the work done under the Act:—

Number of shops visited by day	... ..	165
Number of shops visited by night	... ..	30
Number of instances in which the provisions of the Act were found not to be complied with	... ..	11

In every case the cause for complaint was remedied after notice.

SEATS FOR SHOP ASSISTANTS ACT.

During the year it was not found necessary to take any action under this Act.

BAKEHOUSES.

The details connected with the inspection of bakehouses will be found on page 76.

The number of bakehouses now on the register is 40, and to these 334 visits were made during the past year.

In 6 instances it was found necessary to call attention to the untidy condition of the tables and utensils, and in 17 to the dirty state of the walls and ceilings.

Sanitary Administration.

SUMMARY OF THE WORK DONE BY THE LADY INSPECTORS.

Total number of visits made to houses by the Lady Inspectors in							
respect of the matters detailed below	...	...	...	...	...	...	13,419
No. of visits made in reference to infants under one year of age	...						8,547
,, enquiries concerning deaths of infants, change of residence, etc.							1,414
,, visits and re-visits to cases of minor infectious and other							
diseases notified by the Elementary Education Authorities							2,559
,, references to Sanitary Inspectors	...	...	...	...	...	...	154
,, sub-let houses visited and re-visited	..	...	...	...	...	...	1,883
,, houses found dirty	...	...	...	...	...	...	113
,, routine visits to Midwives	...	...	...	...	...	...	74
,, enquiries <i>re</i> Still-births	...	...	...	...	...	...	70
,, other enquiries in reference to the Midwives' Act	...	...	...	...	...	...	35

SUMMARY OF WORK DONE BY THE INSPECTOR OF NUISANCES AND HIS ASSISTANTS.

NUISANCES.

No. of complaints made by inhabitants	...	...	...	...	...	...	304
,, nuisances discovered as result of the above	...	...	...	...	...	...	610
,, nuisances reported	...	...	...	...	...	...	4,623
,, re-inspections of nuisances	...	...	...	...	...	...	9,051
,, water-closet conversions	...	...	...	...	...	...	24
,, ashpits demolished and replaced by ashbins	...	...	...	...	...	...	50

No. of informations laid ..	...	...	...	...	...	...	4
,, convictions	...	...	...	...	...	...	3
Number withdrawn on payment of costs owing to abatement of nuisance	...	...	...	...	...	...	1
No. of Magistrates' Orders obtained	...	...	...	...	...	...	2
Amount of fines and costs	...	...	...	...	...	£1 5s. 0d.	

COMMUNICATIONS SENT OUT FROM OFFICE.

No. of notices issued to owners ...	..	...	...	...	...	2,186
,, notices issued to occupiers	...	...	...	...	...	111
,, notes to complainants	...	...	...	...	...	70
,, notes sent to comply with notices	...	...	...	...	...	74
Communications to the Borough Engineer	...	...	...	...	...	227
,, ,, Education Authorities	...	...	...	...	...	767
,, ,, Public Library	...	...	...	...	...	358
,, ,, House Surgeon, Bootle Hospital	...	...	...	...	...	358
,, ,, Sunday Schools	...	...	...	...	...	186
,, ,, Day Schools	...	...	...	...	...	798
,, ,, Milk Vendors	...	...	...	...	...	257
Letters <i>re</i> Nuisances	...	...	...	...	...	64
Total						<u>5,456</u>

CANAL BOATS AND CATTLE SHIPS.

No. of Canal Boats inspected in 1911	...	...	...	...	...	210
,, Infringements :—						
re certificates	...	...	...	...	...	3
,, painting and repairing	...	...	...	...	...	6
,, provision of water cask	...	...	...	...	...	1
,, notices sent in respect to same	...	...	...	...	...	5
,, cattle ships inspected	...	...	...	...	...	35

COMMON LODGING HOUSES.

No. registered under the Public Health Act	...	...	...	...	4
No. of day and night inspections	...	...	...	...	433
,, informations laid in respect of infringements	...	...	...	...	—
,, convictions	...	...	...	...	—

SUB-LET HOUSES.

No. of day and night inspections	...	...	...	...	...	647
„ infringements of Bye-laws relating to sub-let houses	...	...	...	...	...	11

STEPS TAKEN TO PREVENT NUISANCE FROM SMOKE.

No. of observations made	...	...	...	...	...	437
„ intimations sent	...	...	...	...	...	26
„ notices served in respect of excessive black smoke	...	...	...	...	...	23
„ informations laid in default of compliance with order	...	...	...	...	...	—
Amount of Fines and Costs	...	..	...	...	...	12s.

DAIRIES, COWSHEDS AND MILKSHOPS.

No. of Milkshops on register	...	...	...	...	...	33
„ Shippens with dairies attached	...	...	...	...	...	33
„ Inspections made	...	...	...	...	...	790

The occupiers of shippens and milkshops have from time to time been verbally cautioned with regard to the cleanliness of the premises, and the cows, and the proper storage of milk.

FACTORY AND WORKSHOP ACT.

WORKSHOPS AND WORKPLACES (EXCLUDING BAKEHOUSES).

No. on Register	...	...	..	...	...	...	...	159
No. of visits and re-visits	...	...	...	...	...	...	...	579
„ workrooms with dirty walls	...	...	...	...	...	...	...	11
„ „ „ „ ceilings	...	...	...	...	..	...	...	11
„ „ „ „ floors	...	...	...	...	...	...	...	4
„ „ „ „ lavatories	...	...	...	..	...	...	...	6
„ „ not properly ventilated	...	...	...	...	...	...	...	2
„ „ found overcrowded	...	...	...	...	...	...	...	—
„ defective drains and water closets	...	...	...	...	...	...	...	14
„ miscellaneous defects found	...	...	...	...	...	...	...	46
„ notices issued to occupiers	...	...	...	...	...	...	...	12
„ „ „ „ owners	...	...	...	...	...	...	...	60
„ „ complied with	...	...	...	...	...	...	...	72
„ references to the Factory Inspector	...	...	...	...	...	...	...	10

BAKEHOUSES.

No. on Register	40
No. of visits and re-visits made	334
„ bakehouses found dirty (walls and ceilings)	17
„ notices issued for limewashing	14
„ notices for defective walls and floors	4
„ notices to cleanse tables, utensils, etc.	4
„ references to the Factory Inspector	3

CONFECTIONERY BAKEHOUSES.

No. on Register	22
„ of visits and re-visits made	109
„ found dirty (walls and ceilings)	5
„ of notices issued for limewashing	3
„ notices issued for defective drainage	5
„ notices issued to cleanse floors, utensils, etc.	2

OUTWORKERS.

No. of Outworkers on Register	28
„ visits and re-visits made to houses of outworkers	152
„ notices served for sanitary defects at houses of outworkers	6

[All the above notices were complied with].

Outworkers employed in Bootle for Liverpool, Birkenhead, and Litherland Firms	{ Tailors or Tailoresses	4
	{ Dressmakers	18
	{ Boot Repairers	5
	{ Laundresses	1
Outworkers employed in Liverpool for Bootle Firms	{ Tailor or Tailoresses	16
	{ Boot Repairers	4

FOOD INSPECTION.

No. of visits to foodshops	1,266
Amount of food seized in small quantities and destroyed during the year	1,669 lbs.
No. of inspections of hawkers' carts	76
„ „ „ slaughterhouses	31
„ „ „ food factories	93

POISONS AND PHARMACY ACT, 1908.

No licenses were issued under this Act during 1911.

SUMMARY OF LEGAL PROCEEDINGS.

Defective drains, etc.	4
Infringements of Sale of Food and Drugs Acts	23
Smoke nuisance	2

DISINFECTION.

No. of houses disinfected after notifiable infectious diseases	357
„ houses disinfected after phthisis	139
„ houses disinfected after measles	1
„ schools disinfected after scarlet fever and diphtheria	2
„ visits made to infected houses	333
„ re-visits made to infected houses	1,653
„ houses cleaned in default of owners	7
„ houses disinfected for causes other than fevers	18

NOTE.—Since June, 1903, all houses with a rental of eight shillings per week or under, have been cleansed after infectious disease (*i.e.*, the walls stripped and the ceilings whitened) by the Corporation at their own cost.

FILTHY HOUSES.

No. of houses reported	93
„ notices sent	106
„ houses cleansed	91

LIST OF ARTICLES DISINFECTED.

	Bootle.	Litherland.	Formby.	Totals.
Mattresses	417	74	38	529
Beds	428	44	27	499
Bolsters and Pillows	1,213	111	131	1,455
Blankets	727	88	66	881
Quilts	585	64	63	712
Sheets	582	53	39	674
Carpets	219	33	58	310
Wearing Apparel .	2,289	1,304	413	4,006
Miscellaneous Articles	607	608	75	1,290
	<u>7,067</u>	<u>2,379</u>	<u>910</u>	<u>10,356</u>

NOTE.—These figures do not include the ambulance bedding (one bed, one pillow and three blankets), which is disinfected after the removal of each case.

The following articles were destroyed at the request of the owners, after infectious diseases :—

Wearing apparel ...	20	Blankets	7
Mattresses	14	Quilts	4
Beds... ..	16	Miscellaneous	34
Bolsters and Pillows	14	Sheet	1

FLUSHING.

The flushing gang consists of two Corporation workmen, and one Liverpool waterman.

No. of private houses at which drains were flushed .	...	11,997
„ passage sewers flushed... ..	...	767
„ public buildings at which drains were flushed	...	63

The drains at the Bootle Borough Hospital were flushed 12 times during the year.

The amount of water used during the year was 3,185,770 gallons.

TABLE 1.—COUNTY BOROUGH OF BOOTLE.
VITAL STATISTICS OF WHOLE DISTRICT DURING 1911 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		'TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un- corrected Number.	Nett.		Number.	Rate.	of Non- residents in the District.	Residents not registered in the District.	UNDER ONE YEAR OF AGE		AT ALL AGES.	
			Number.	Rate.					Number.	Rate per 1,000 Births	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1906.	65,860	2,171	—	*32·9	1,039	15·7	33	203	312	143	1,209	18·3
1907.	66,686	2,168	—	*32·5	992	14·8	39	175	268	123	1,123	16·9
1908.	67,523	2,182	—	*32·3	1,078	15·9	41	188	314	143	1,225	18·1
1909.	68,370	2,138	—	*31·2	989	14·4	26	185	253	118	1,148	16·7
1910.	69,229	2,016	—	*29·1	872	12·5	38	185	249	123	1,019	14·7
1911.	70,100	2,093	2,120	30·2	1,050	14·9	43	276	308	145	1,283	18·3

* These rates are based on the uncorrected numbers.

Total Population at all ages at census of 1911, 69,881; the number of area covered by water—1,946.
Area of District in acres, exclusive of area covered by water—1,946.
not yet known. At the census of 1901, the average number of persons per house was 5·8.
The Union Workhouse is not within the District.

TABLE 2.—COUNTY BOROUGH OF BOOTLE.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1911.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.						Total cases removed to Hospital.	
	At all Ages.	At Ages—Years.						Derby Ward.	Stanley Ward.	Mersey Ward.	Knowsley Ward.	Linnere Ward.	Orrell Ward.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.								65 and upwards.
Small-pox	1	—	—	—	—	1	—	—	—	1	—	—	—	1	
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Diphtheria (including Mem- branous Croup)	85	1	33	44	4	2	1	32	28	3	11	10	1	60	
Erysipelas	33	—	—	4	4	13	10	7	1	10	8	6	1	—	
Scarlet Fever	238	2	69	151	12	4	—	87	56	10	19	54	12	177	
Typhus Fever...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Enteric Fever	16	—	—	3	4	7	2	2	—	3	7	3	1	12	
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Continued Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Puerperal Fever	5	—	—	—	1	4	—	—	1	—	1	3	—	—	
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Under Tuberculosis Regulations, 1908	129	1	1	21	27	54	19	10	14	51	37	15	2	—	
Phthisis { Under Tuberculosis Regulations, 1911	31	—	2	6	8	13	2	5	4	6	7	9	—	—	
Others	28	1	1	5	7	12	2	6	—	7	5	7	3	—	
Totals	566	5	106	234	67	110	36	149	104	91	95	107	20	250	

Corporation Infectious Diseases Hospital, Linacre Lane, Bootle—Total available beds, 120. Number of Diseases that can be concurrently treated, 5.

TABLE NO. 3.—COUNTY BOROUGH OF BOOTLE.

CAUSES OF, AND AGES AT DEATH DURING THE YEAR 1911.

CAUSES OF DEATH.	NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.										TOTAL DEATHS WHETHER OF "RESIDENTS" OR "NON-RESIDENTS" IN INSTITUTIONS IN THE DISTRICT.
	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 & under 25 years.	25 & under 45 years.	45 & under 65 years.	65 and upwards.		
All causes { Certified	1,236	296	93	72	52	47	154	287	235	129	
Uncertified	47	12	4	—	2	1	8	15	5	2	
Enteric Fever	3	—	—	—	—	1	2	—	—	2	
Small-pox	1	—	—	—	—	—	1	—	—	1	
Measles	21	3	11	5	2	—	—	—	—	—	
Scarlet Fever	5	—	1	3	1	—	—	—	—	6	
Whooping Cough	22	8	5	8	1	—	—	—	—	—	
Diphtheria and Croup	11	—	1	5	4	1	—	—	—	8	
Influenza	7	—	—	—	—	2	1	2	2	1	
Erysipelas	2	—	—	—	—	—	—	—	2	—	
Cerebro-Spinal Fever	2	1	—	—	—	—	1	—	—	1	
Meningitis	15	6	2	1	3	1	1	1	—	4	
Venereal Diseases	7	7	—	—	—	—	—	—	—	1	
Phthisis (Pulmonary Tuberculosis)	96	2	1	2	12	13	42	21	3	—	
Tuberculous Meningitis	8	2	1	1	3	1	—	—	—	—	
Other Tuberculous Diseases	22	1	3	3	4	3	6	2	—	4	
Rheumatic Fever	4	1	—	—	1	1	1	—	—	—	
Cancer, Malignant Disease	73	—	—	—	—	—	13	43	17	5	
Bronchitis	110	29	5	2	—	—	10	30	34	4	
Broncho-Pneumonia	62	11	16	10	3	3	2	10	7	6	
Pneumonia (all other forms)	89	7	6	6	3	3	21	23	15	10	
Other diseases of Respiratory Organs	16	—	1	4	1	2	2	2	4	2	
Diarrhoea and Enteritis	144	93	29	6	2	—	1	7	6	5	
Appendicitis and Typhlitis	7	—	—	—	1	2	1	1	2	5	
Alcoholism	3	—	—	—	—	—	1	2	—	—	
Cirrhosis of Liver	7	—	—	—	—	—	1	5	1	1	
Nephritis and Bright's Disease... ..	24	1	—	1	2	—	4	10	6	2	
Puerperal Fever	1	—	—	—	—	—	1	—	—	—	
Other accidents and diseases of Preg- nancy and Parturition	5	—	—	—	—	2	3	—	—	—	
Congenital Debility and Malformation, including Premature Birth	104	102	1	1	—	—	—	—	—	4	
Violent Deaths, excluding Suicide	44	1	1	7	3	5	10	13	4	31	
Suicides	3	—	—	—	—	—	1	1	1	3	
Heart Disease	55	—	—	—	1	2	9	25	18	3	
Senile Decay	50	—	—	—	—	—	—	3	47	1	
Other Defined Diseases	209	27	6	5	5	5	19	81	61	16	
Diseases ill-defined or unknown	51	6	7	2	2	1	8	15	10	5	
	1283	308	97	72	54	48	162	302	240	131	

TABLE 4.—COUNTY BOROUGH OF BOOTLE.

INFANT MORTALITY.

1911. Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1—2 Weeks.	2—3 Weeks.	3—4 Weeks.	Total under 1 Month.	1—3 Months.	3—6 Months.	6—9 Months.	9—12 Months.	Total Deaths under One Year.
All Causes	(Certified { Uncertified	45 7	16 1	22 —	13 —	96 8	53 3	67 1	41 —	39 —	296 12
Small-pox	...	—	—	—	—	—	—	—	—	—	—
Chicken-pox	...	—	—	—	—	—	—	—	—	—	—
Measles	...	—	—	—	—	—	1	—	—	2	3
Scarlet Fever	...	—	—	—	—	—	—	—	—	—	—
Diphtheria and Croup	...	—	—	—	—	—	1	3	2	2	8
Whooping Cough	...	—	—	2	3	5	11	11	12	9	48
Diarrhoea	...	—	1	2	3	6	8	18	4	9	45
Enteritis	...	—	—	—	—	—	—	2	—	—	2
Tuberculous Meningitis	...	—	—	—	—	—	—	1	1	1	3
Abdominal Tuberculosis	...	—	—	—	—	—	—	—	—	—	2
Other Tuberculous Diseases	...	—	—	—	—	—	—	1	—	—	1
Congenital Malformations	...	1	1	1	—	3	4	1	—	—	8
Premature Birth	...	34	8	7	2	51	2	2	—	—	55
Atrophy, Debility and Marasmus	...	5	2	5	1	13	7	12	5	2	39
Atelectasis	...	1	—	—	—	1	—	—	—	—	1
Injury at Birth	...	2	—	—	—	2	—	—	—	—	2
Erysipelas	...	—	—	—	—	—	—	—	—	—	—
Syphilis	...	—	1	—	—	1	2	3	1	—	7
Rickets	...	—	—	—	—	—	—	—	—	1	1
Meningitis (not Tuberculous)	...	—	—	—	—	—	—	3	1	2	7
Convulsions	...	4	2	—	1	7	1	1	1	2	15
Gastritis	...	—	1	—	—	1	4	1	—	1	3
Laryngitis	...	—	—	—	—	—	—	—	—	—	—
Bronchitis	...	—	—	4	2	6	10	4	7	2	29
Pneumonia (all forms)	...	—	1	—	—	1	3	3	5	6	18
Suffocation, overlying	...	—	—	—	—	—	—	1	—	—	1
Other Causes	...	5	—	1	1	7	2	2	—	—	13
		52	17	22	13	104	56	68	41	39	308

Nett Births in the year { legitimate ... 2,054
 illegitimate ... 66

Nett Deaths in the year of { legitimate infants ... 295
 illegitimate infants ... 13

TABLE 5.—COUNTY BOROUGH OF BOOTHLE.
VITAL STATISTICS OF SEPARATE LOCALITIES IN 1911 AND PREVIOUS YEARS.

NAMES OF LOCALITIES	THE WHOLE BOROUGH				DERBY WARD				STANLEY WARD				MERSEY WARD				KNOWSLEY WARD				LINACRE WARD				ORRELL WARD				
	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Average of years 1906 to 1910	
YEAR																													
1901 ..	58,731	1,837	1,054	337	10,068	368	165	52	11,170	288	148	49	13,299	355	317	92	12,408	417	264	83	11,786	379	160	61					
1902 ..	59,436	1,949	1,162	302	10,371	378	172	43	11,140	264	150	36	13,288	451	338	96	12,375	416	275	58	12,262	440	226	69					
1903 ..	60,149	2,010	1,139	325	10,748	369	185	53	11,224	273	173	58	13,287	445	287	73	12,374	469	279	76	12,516	454	215	65					
1904 ..	60,870	1,918	1,179	346	11,000	375	198	58	11,285	264	160	46	13,259	427	348	95	12,438	424	281	79	12,888	428	192	68					
1905 ..	61,601	2,079	1,138	321	11,348	452	221	68	11,449	297	183	48	13,183	429	295	75	12,371	422	223	55	13,250	479	216	75					
Borough Extended																													
1906 ..	65,860	2,171	1,209	312	12,029	428	215	52	11,436	293	146	35	12,982	406	279	72	12,181	397	269	62	13,712	498	250	76	3,530	149	50	15	
1907 ..	66,636	2,168	1,128	268	12,560	439	191	44	11,467	249	144	23	12,930	377	260	62	12,134	430	238	57	13,997	528	240	61	3,598	145	55	21	
1908 ..	67,523	2,182	1,225	314	12,812	469	189	51	11,694	278	152	31	12,976	415	304	83	12,175	381	260	61	14,188	497	266	66	3,678	142	54	22	
1909 ..	68,370	2,138	1,146	253	13,023	415	228	51	11,933	257	142	28	13,073	394	295	73	12,265	372	205	48	14,317	541	231	46	3,759	159	47	7	
1910 ..	69,229	2,016	1,019	249	13,237	441	196	57	12,156	224	123	18	13,182	350	237	65	12,369	365	200	39	14,442	498	223	53	3,943	138	40	17	
	63,845	2,046	1,140	302	11,719	413	196	52	11,495	268	152	37	13,145	407	296	78	12,309	409	249	61	13,335	474	221	64	3,679	146	49	16	
	Average of years 1901 to 1910																								Average of years 1906 to 1910				
1911 ..	70,100	2,093	1,283	308	13,378	436	219	49	12,335	247	196	39	13,340	391	278	61	12,517	356	275	76	14,601	525	266	68	3,929	138	49	15	

* This total does not include 27 transferable births.

